Products

Fluorinated performance products

Fluorinated Surfactant

Surflon

Fluorinated Surfactant

Fluorinated Surfactant[Surflon] was developed by Asahi Glass Co., Ltd. And Seimi Chemical Co., Ltd. through the application of the techniques accumulated for many years in the field of fluorine. Surflon with perfluoroalkyl group in molecular structures provide many unmatched properties and performances not available with hydrocarbon surfactants. In addition to various kinds of line up, we develop new grades of Surflon for meeting customers' needs with our potential of organic fluorine chemistry and the experience.

• Characteristics of Surflon

1. Surface tension can be lowered remarkably.
   Surflon can provide low surface tension which can not be attained by the conventional surfactants.
   For example, Surflon is effective to improve wetting of solid surface, levelling of solution system and foam stability in fire fighting system.

2. Effective at low concentration
   Perfluoroalkyl group with linear and rigid structure has a property to align parallel and provides excellent performance at low concentration.

3. Usable in organic solvents
   Perfluoroalkyl group has hydrophobic and lipophobic character. By combination of Perfluoroalkyl and lipophilic groups, Surflon shows surface activity even in organic Solvents.

• Water soluble grades(1)

Grade	S-111	S-112	S-113	S-121
Ionic nature	Anionic	Anionic	Anionic	Cationic
Structure	Salt of F-alkyl Carboxylic acid	F-alkyl Phosphate	Salt of F-alkyl Carboxylic acid	F-alkyl trimetyl ammonium
		Straw		Yellow

Appearance	Light yellow liquid	colored Dispersing liquid	Light yellow liquid	brown liquid
Solid Content %,by weight	30	15	30	30
Solvent	Water/IPA	Water	Water/IPA	Water/IPA
Flash point (℃)	18℃	-	18.5℃	23℃
Surface Tension (mN/m, 25℃) 0.01%	30.0	39.0	22.5	17.0
Surface Tension (mN/m, 25℃) 0.1%	17.0	37.4	15.8	16.2

- Water soluble grades(2)

Grade Ionic nature	S-131 Amphoteric	S-132 Amphoteric	S-141 Nonionic	S-145 Nonionic
Structure	F-alkyl Betaine	F-alkyl Betaine	F-alkyl amine oxide	EO adduct of F-alkyl amide
Appearance	Light yellow liquid	Light yellow liquid	Light yellow liquid	Yellow brown liquid
Solid Content %,by weight	30	30	30	30
Solvent	Water/IPA	Water/IPA	Water/IPA	Water/IPA
Flash point (℃)	22℃	22℃	28℃	26℃
Surface Tension 0.01%	16.0	22.5	16.0	16.0
Surface Tension (mN/m, 25℃) 0.1%	15.5	17.0	15.5	15.5

- Oil soluble grades(1)

Grade Ionic nature	S-381 Nonionic	S-383 Nonionic	S-393 Nonionic
Structure	Oligomer with F-alkyl group	Oligomer with F-alkyl group	Oligomer with F-alkyl group

Solid Content %,by weight	70	50	100
Solvent	Ethyl acetate	–	Ethyl acetate
Flash point (℃)	- 5℃	- 20℃	60℃
Solubility to water	Soluble	Insoluble	<0.05%
Viscosity (mPa·s,25℃)	300	7.8	640(80℃)
Surface Tension (0.1%) (mN/m, 25℃) Water (72.5)	17.5	-	32.3(0.01%)
Surface Tension (0.1%) (mN/m, 25℃) Ethyl acetate (23.9)	23.5	20.7	21.5
Surface Tension (0.1%) (mN/m, 25℃) Toluene (28.4)	22.5	21.0	16.3
Surface Tension (0.1%) (mN/m, 25℃) Ethyl Cellosolve (32.0)	25.0	21.6	18.8

- Oil soluble grades(2)

Grade	S-101	KH-40	SA-100
Ionic nature	Nonionic	Nonionic	Nonionic
Structure	Oligomer with F-alkyl group	Adduct of Rf-Epoxy and EO	Blend of Rf-oligomer and HC-surfactant
Appearance	Light yellow viscous liquid	Light yellow viscous liquid	Light yellow viscous liquid
Solid Content %,by weight	30	100	36
Solvent	Ethyl acetate	-	Water/Ethanol /Ethyl acetate
Flash point (℃)	-12℃	-	23℃
Solubility to water	Insoluble	<0.05%	Soluble
Viscosity (mPa·s,25℃)	2.2	140(50℃)	31.7

	Water (72.5)	-	23.6(0.01%)	22.0
Surface Tension (0.1%) (mN/m, 25℃)	Ethyl acetate (23.9)	21.0	23.9	-
	Toluene (28.4)	20.4	28.4	-
	EthylCellosolve (32.0)	19.1	28.2	-

For particulars, please apply to the Sales and Marketing Group of Chemicals Div.

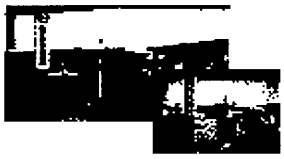
e-mail : tky-info@seimichemical.co.jp
Tel : +81-3-3866-7623
Fax : +81-3-3866-7098

BACK

History

- 2000 — Started production of Chloromethylstyrene.
- 1998 — Obtained ISO certification.
  Started production of SELION(Ni).
- 1997 — Celebrated 50th anniversary.
- 1995 — Started production of SELION(Co), inorganic mixed oxide powders for Lithium-ion secondary battery applications.
  Started production of DFS liquid crystals.
  Started production of reagent grade caustic soda pellet.
- 1993 — Started production of SEIMICRON(CMP slurry).
- 1992 — Commissioned Kashima plant.

- 1984 — Merged with ASUNY INC., another Asahi Glass affiliate and became "Seimi Chemical Co.,Ltd.".



- 1983 — Started production of FM Series, fluorinated intermediates for pharmaceuticals.
- 1982 — Started production of LUMIFLON, high durability paint.
- 1981 — Started production of SF coat, Anti Flux Migration Agent.
- 1979 — Started production of SURFLON, fluorinated surfactant.
- 1978 — Started production of Liquid Crystals.
- 1968 — Started production of Chloromethylstyrene, a monomer for high-performance polymer production.

- 1958 Started production of glass polishing agent.

- 1947 Established December 18.1947.

STIC Search Report
EIC 1700

Scientific & Technical Information Center
USPTO

STIC Database Tracking Number: 93783

TO: Binh X Tran
Location: CP3 10D04
May 15, 2003

Case Serial Number: 09/401490

From: Kathleen Fuller
Location: EIC 1700
CP3/4 3D62
Phone: 308-4290

Kathleen.Fuller@uspto.gov

Search Notes

sira
Search and Information Resources Administration

Access DB# 93783

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Binh Tran Examiner #: 76892 Date: 5/12/03
Art Unit: 1765 Phone Number 308 1867 Serial Number: 09/401490
Mail Box and Bldg/Room Location: 10D04 CP3 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Resist Composition and Patterning Method

Inventors (please provide full names): Satoshi Watanabe; Toyohisha Sakurada Yushitaka Yanagi; Shigehiro Nagura; Toshinobu Ishihara

Earliest Priority Filing Date: 09/22/98

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

09/401,490

(1) A composition comprising:

- a florochemical surfactant (i,e KH-20, KH-30, KH-40 trademark of Asahi Glass)
- a photo-acid generator capable of generating acid upon exposure to deep UV, x-ray or electron beam
- a base resin of an alkalin-insoluble or scarely insoluble resin (e.g novalak resin, polyhydroxystyrene

****

STAFF USE ONLY

Searcher: K. Fuller
Searcher Phone #:
Searcher Location:
Date Searcher Picked Up:
Date Completed: 5/15/03
Searcher Prep & Review Time: 30
Clerical Prep Time:
Online Time: 85

Type of Search

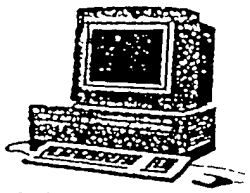
NA Sequence (#)
AA Sequence (#)
Structure (#) 2
Bibliographic
Litigation
Fulltext
Patent Family
Other

Vendors and cost where applicable

STN
Dialog
Questel/Orbit
Dr.Link
Lexis/Nexis
Sequence Systems
WWW/Internet
Other (specify)

PTO-1590 (8-01)

EIC1700
Search Results
Feedback Form (Optional)



Scientific & Technical Information Center

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact *the EIC searcher* who conducted the search *or contact*:

Kathleen Fuller, Team Leader, 308-4290, CP3/4 3D62

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* [ ] *Example:* [1713]
- *Relevant prior art **found**, search results used as follows:*
  - [ ] 102 rejection
  - [ ] 103 rejection
  - [ ] Cited as being of interest.
  - [ ] Helped examiner better understand the invention.
  - [ ] Helped examiner better understand the state of the art in their technology.

  Types of relevant prior art found:
  - [ ] Foreign Patent(s)
  - [ ] Non-Patent Literature
    (journal articles, conference proceedings, new product announcements etc.)
- *Relevant prior art **not found**:*
  - [ ] Results verified the lack of relevant prior art (helped determine patentability).
  - [ ] Search results were not useful in determining patentability or understanding the invention.

Other Comments:

Drop off completed forms in **CP3/4 - 3D62** .

=> FILE REG
FILE 'REGISTRY' ENTERED AT 10:10:25 ON 15 MAY 2003

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 14 MAY 2003 HIGHEST RN 515808-31-8
DICTIONARY FILE UPDATES: 14 MAY 2003 HIGHEST RN 515808-31-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 10:10:29 ON 15 MAY 2003

FILE COVERS 1907 - 15 May 2003 VOL 138 ISS 20
FILE LAST UPDATED: 14 May 2003 (20030514/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

surfactants in claims

=> D QUE
L2 3 SEA FILE=REGISTRY ABB=ON (251907-30-9/BI OR 275364-62-0/BI OR 275364-64-2/BI)
L4 170015 SEA FILE=REGISTRY ABB=ON (C(L)F(L)H(L)O)/ELS(L)4/ELC.SUB
L5 125616 SEA FILE=HCAPLUS ABB=ON L4
L6 2790 SEA FILE=HCAPLUS ABB=ON L5(L)?RESIST?
L7 676 SEA FILE=HCAPLUS ABB=ON L6 AND PHOTOG?/SC,SX
L8 881 SEA FILE=HCAPLUS ABB=ON L5(L)?SURFACTANT?
L9 15 SEA FILE=HCAPLUS ABB=ON L7 AND L8
L10 9 SEA FILE=HCAPLUS ABB=ON L2

fluoro compounds

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

```
L14          41 SEA FILE=HCAPLUS ABB=ON  L7 AND SURFACTANT?
L15          50 SEA FILE=HCAPLUS ABB=ON  L9 OR L10 OR L14
L16        6862 SEA FILE=HCAPLUS ABB=ON  (FLUOR? OR PERFLUOR? OR F)(2A)SURFACTA
               NT?
L17        1097 SEA FILE=HCAPLUS ABB=ON  L16 AND ?RESIST?
L18         366 SEA FILE=HCAPLUS ABB=ON  L17 AND PHOTOG?/SC,SX
L21           4 SEA FILE=HCAPLUS ABB=ON  L18 AND CONTACT?(2A)?ANGLE?
L22         250 SEA FILE=HCAPLUS ABB=ON  L18 AND SURFACTANTS/IT
L23         126 SEA FILE=HCAPLUS ABB=ON  L22 AND (COMPOSITION? OR COMPNS)
L24          66 SEA FILE=HCAPLUS ABB=ON  L23 AND MOA/RL
L25          11 SEA FILE=HCAPLUS ABB=ON  L24 AND RESISTS/IT
L26          39 SEA FILE=HCAPLUS ABB=ON  L22 AND PHOTO?(3A)?GENERAT?
L27          93 SEA FILE=HCAPLUS ABB=ON  L15 OR L21 OR L25 OR L26
L28          83 SEA FILE=HCAPLUS ABB=ON  L27 AND PHOTOG?/SC
L29          76 SEA FILE=HCAPLUS ABB=ON  L28 AND SURFACTANT?/IT
L30         732 SEA FILE=HCAPLUS ABB=ON  FLUOROSURFACTANT?
L31         104 SEA FILE=HCAPLUS ABB=ON  L30(L)?RESIST?
L32          54 SEA FILE=HCAPLUS ABB=ON  L31 AND PHOTOG?/SC
L34          29 SEA FILE=HCAPLUS ABB=ON  L32 AND (COMPOSITION? OR COMPNS)
L35          88 SEA FILE=HCAPLUS ABB=ON  L29 OR L34
L36          79 SEA FILE=HCAPLUS ABB=ON  L35 AND (RESISTS/IT OR PHOTORESISTS/IT
               )
L37          70 SEA FILE=HCAPLUS ABB=ON  L36 AND (COMPOSITION? OR COMPNS)
L38          77 SEA FILE=HCAPLUS ABB=ON  L37 OR L10
```

=> D L38 ALL HITSTR

L38 ANSWER 1 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2003:317558 HCAPLUS
TI Positive chemically amplified **resist compositions** having high resolution and suppressed dependency of focus latitude on pattern density
IN Kodama, Kunihiko
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 46 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08F020-00; C08F024-00; C08K005-42; C08L033-00; C08L037-00; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003122012	A2	20030425	JP 2001-320380	20011018
PRAI	JP 2001-320380		20011018		

AB The **compns**. contain (A) compds. which generate C.gtoreq.2 F-substituted sulfonic acids by irradn. of actinic ray or radiation and (B) resins which can be decomposted with acids and increase rate of dissoln. toward alkali developers, contg. .gtoreq.1 repeating units selected from I and II (R1 = alkyl, acid-decompg. group; m = 0-4 integer; n = 0-10 integer; R2, R3 = H, alkyl, cycloalkyl, acid-releasable protection group). Preferably, A comprise sulfonium salts. Preferably, the **compns**. further contain **F**-based

surfactants or silicone-based surfactants and bases which may be selected from those having structures of alkylamine, ether bond-contg. alkylamine, HO-contg. alkylamine, aniline, pyridine, diazabicyclo, ammonium hydroxide, ammonium carboxylate, and imidazole.

ST pos chem amplified **resist** fluorinated sulfonium salt; **photoacid generator** sulfonium salt pos **resist**; cardo methacrylate polymer pos deep UV **resist**; cycloalkane polymer pos deep UV **resist**

IT INDEXING IN PROGRESS

IT Amines
Bases
RL: MOA (Modifier or additive use); USES (Uses)
(acid diffusion suppresser; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT Cardo polymers
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT Sulfonium compounds
RL: CAT (Catalyst use); USES (Uses)
(**photoacid generator**; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT Positive **photoresists**
(pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT **Surfactants**
(silicones or **F** compds.; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT Polysiloxanes
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant**; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT 102-82-9, Tri-n-butylamine 484-47-9, 2,4,5-Triphenylimidazole 1116-76-3, Tri-n-octylamine 2052-49-5, Tetrabutylammonium hydroxide 19293-63-1, Dicyclohexylmethylamine 19600-49-8, Triphenylsulfonium acetate 24544-04-5, 2,6-Diisopropylaniline
RL: MOA (Modifier or additive use); USES (Uses)
(acid diffusion suppresser; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT 3744-08-9P, Triphenylsulfonium iodide
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate in sulfonium salt prepn., for **photo** acid **generator**; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT 96-48-0, .gamma.-Butyrolactone 97-64-3, Ethyl lactate 108-94-1, Cyclohexanone 1320-67-8, Propylene glycol monomethyl ether 84540-57-8, Propylene glycol monomethyl ether acetate
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; pos. chem. amplified **resist compns**.

having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT 945-51-7, Diphenyl sulfoxide 1763-23-1, Perfluoro-n-octanesulfonic acid 14067-34-6, Copper benzoate
RL: RCT (Reactant); RACT (Reactant or reagent)
(sulfonium salt prepn. from, for **photo** acid **generator**; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant**; pos. chem. amplified **resist compns**. having high resoln. and suppressed dependency of focus latitude on pattern d.)

IT INDEXING IN PROGRESS

=> D L38 ALL HITSTR 2-77

L38 ANSWER 2 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2003:241052 HCAPLUS
DN 138:262693
TI Positive photoresist **composition**
IN Fujimori, Toru; Kawabe, Yasumasa
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 101 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1296190	A1	20030326	EP 2002-21204	20020918
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
PRAI	JP 2001-285180	A	20010919		
	JP 2002-563	A	20020107		

AB A pos. resist **compn**. comprises the components of: (A) a compd. capable of generating an acid upon irradn. with one of an actinic ray and a radiation; (B) a resin that is insol. or slightly sol. in alkalis, but becomes alkali-sol. under an action of an acid; (C) a basic compd.; and (D) a compd. comprising at least three hydroxyl groups or at least three substituted hydroxyl groups, and comprising at least one cyclic structure. The present invention relates to a pos. resist **compn**. used in a process of manuf. semiconductors and which far UV light with wavelengths .ltoreq. 250 nm is used as an exposure light source or an electron beam is used as an irradn. source.

ST pos photoresist **compn**

IT Positive **photoresists**
(pos. photoresist **compn**.)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos. photoresist **compn**. contg.)

IT 24979-70-2DP, VP15000, reaction product with Et vinyl ether 129674-22-2P 159296-87-4P 177034-73-0P 177034-75-2P 199432-82-1P 200808-68-0P

228101-60-8P 250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantylmethacrylate copolymer **262617-13-0P** 288303-55-9P
288620-13-3P 288620-15-5P 289706-85-0P 325143-38-2P 326591-96-2P
364736-22-1P 372968-15-5P 391232-36-3P 398140-38-0P 398140-43-7P
398140-45-9P 398140-47-1P 398140-50-6P 398140-52-8P 398140-55-1P
398140-57-3P 398140-59-5P 398140-64-2P 398140-69-7P 398140-73-3P
398140-77-7P 398140-78-8P 398140-79-9P 398140-81-3P 398140-86-8P
398140-87-9P 398140-88-0P 398140-89-1P 398140-94-8P 398141-00-9P
398141-11-2P 398141-13-4P 398141-14-5P 405509-18-4P
430436-66-1P 430436-67-2P 430436-68-3P
430436-70-7P 430436-72-9P 430436-74-1P
430436-76-3P 430436-78-5P 430436-79-6P
430436-81-0P 430436-82-1P 430436-84-3P
430436-85-4P 430436-86-5P 430436-87-6P
430436-89-8P 430436-90-1P 430436-91-2P
430436-92-3P 430436-94-5P 430436-95-6P
430436-97-8P 430436-98-9P 430436-99-0P
430437-09-5P 430437-11-9P 430437-12-0P
430437-13-1P 430437-14-2P 430437-15-3P
430437-17-5P 430437-18-6P 430437-19-7P
430437-21-1P 430437-22-2P 430437-24-4P
431062-12-3P 431062-14-5P 431062-16-7P
431062-17-8P 503003-64-3P 503003-65-4P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **photoresist compn.** contg.)

IT 109-92-2DP, Ethyl vinyl ether, reaction product with polyhydroxystyrene
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. photoresist **compn.** contg.)

IT 57-55-6, Propylene glycol, uses 67-68-5, Dimethyl sulfoxide, uses 96-48-0, .gamma.-Butyrolactone 97-64-3, Ethyl lactate 107-21-1, Eth-ylene glycol, uses 108-94-1, Cyclohexanone, uses 109-86-4, Ethylene glycol monomethyl ether 110-43-0, 2-Heptanone 110-80-5, Ethylene glycol monoethyl ether 123-86-4, Butyl ac-etate 127-19-5, N,N-Dimethylacetamide 763-69-9 872-50-4, N-Methylpyrrolidone, uses 1320-67-8, Propylene glycol monomethyl ether 52125-53-8, Propylene glycol monoethyl ether 84540-57-8, Propylene glycol monomethyl ether acetate
RL: TEM (Technical or engineered material use); USES (Uses)
(solvent; pos. photoresist **compn.** contg.)

IT 137462-24-9, Megafac F176 216679-67-3, Megafac R08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos. photoresist **compn.** contg.)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Fuji Photo Film Co Ltd; EP 0788031 A 1997 HCAPLUS
(2) Fuji Photo Film Co Ltd; EP 0803775 A 1997 HCAPLUS
(3) Fuji Photo Film Co Ltd; EP 0869393 A 1998 HCAPLUS
(4) Maeda, K; US 2001026901 A1 2001 HCAPLUS
(5) Nec Corporation; WO 0001684 A 2000 HCAPLUS

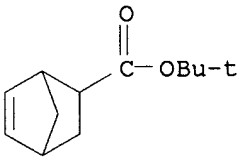
IT **262617-13-0P 430436-66-1P 430436-67-2P**
430436-68-3P 430436-70-7P 430436-72-9P
430436-74-1P 430436-76-3P 430436-78-5P
430436-79-6P 430436-81-0P 430436-82-1P
430436-84-3P 430436-85-4P 430436-86-5P
430436-87-6P 430436-89-8P 430436-90-1P
430436-91-2P 430436-92-3P 430436-94-5P

430436-95-6P 430436-97-8P 430436-98-9P
430436-99-0P 430437-09-5P 430437-11-9P
430437-12-0P 430437-13-1P 430437-14-2P
430437-15-3P 430437-17-5P 430437-18-6P
430437-19-7P 430437-21-1P 430437-22-2P
430437-24-4P 431062-12-3P 431062-14-5P
431062-16-7P 431062-17-8P 503003-64-3P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **photoresist compn.** contg.)

RN 262617-13-0 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

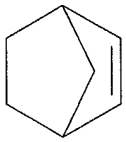
CM 1

CRN 154970-45-3
CMF C12 H18 O2



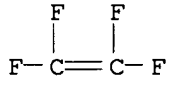
CM 2

CRN 498-66-8
CMF C7 H10



CM 3

CRN 116-14-3
CMF C2 F4

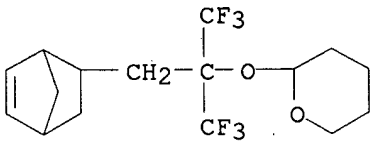


RN 430436-66-1 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-

(trifluoromethyl)ethoxy]tetrahydro-2H-pyran and 2,5-furandione (9CI) (CA INDEX NAME)

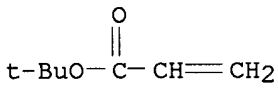
CM 1

CRN 430436-65-0
CMF C16 H20 F6 O2



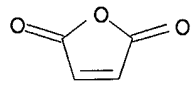
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

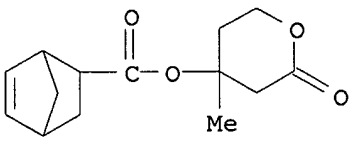
CRN 108-31-6
CMF C4 H2 O3



RN 430436-67-2 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrafluoroethene and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA INDEX NAME)

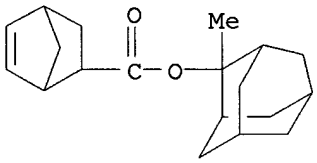
CM 1

CRN 357400-43-2
CMF C14 H18 O4



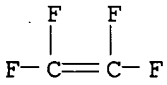
CM 2

CRN 328087-85-0
CMF C19 H26 O2



CM 3

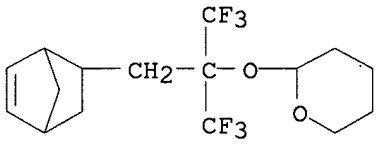
CRN 116-14-3
CMF C2 F4



RN 430436-68-3 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran and tetrafluoroethene (9CI) (CA INDEX NAME)

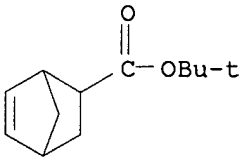
CM 1

CRN 430436-65-0
CMF C16 H20 F6 O2



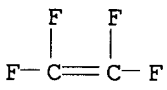
CM 2

CRN 154970-45-3
CMF C12 H18 O2



CM 3

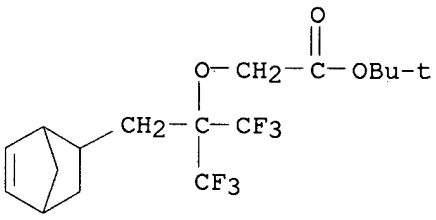
CRN 116-14-3
CMF C2 F4



RN 430436-70-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

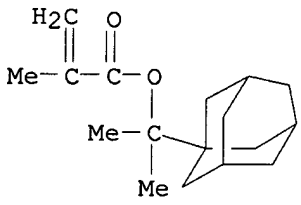
CM 1

CRN 430436-69-4
CMF C17 H22 F6 O3



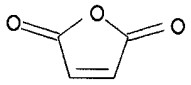
CM 2

CRN 279218-76-7
CMF C17 H26 O2



CM 3

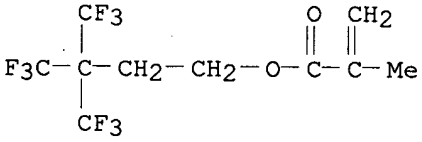
CRN 108-31-6
CMF C4 H2 O3



RN 430436-72-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate and 4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

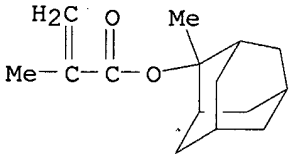
CM 1

CRN 430436-71-8
CMF C10 H9 F9 O2



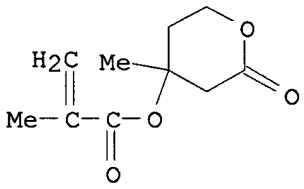
CM 2

CRN 177080-67-0
CMF C15 H22 O2



CM 3

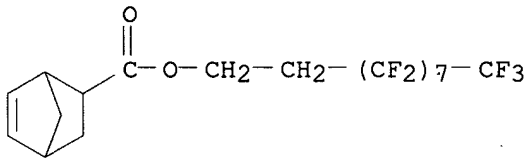
CRN 177080-66-9
CMF C10 H14 O4



RN 430436-74-1 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with 1,1-dimethylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

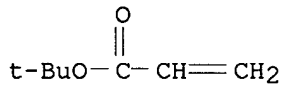
CM 1

CRN 430436-73-0
CMF C18 H13 F17 O2



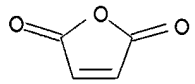
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

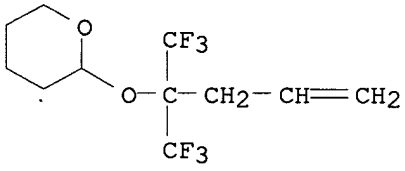
CRN 108-31-6
CMF C4 H2 O3



RN 430436-76-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with 2-[[1,1-bis(trifluoromethyl)-3-butenyl]oxy]tetrahydro-2H-pyran and 2,5-furandione (9CI) (CA INDEX NAME)

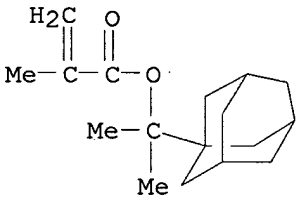
CM 1

CRN 430436-75-2
CMF C11 H14 F6 O2



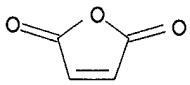
CM 2

CRN 279218-76-7
CMF C17 H26 O2



CM 3

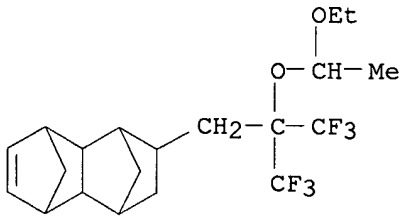
CRN 108-31-6
CMF C4 H2 O3



RN 430436-78-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, tetrahydro-5,5-dimethyl-2-oxo-3-furanyl ester, polymer with 2-[2-(1-ethoxyethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]-1,2,3,4,4a,5,8,8a-octahydro-1,4:5,8-dimethanonaphthalene and 2,5-furandione (9CI) (CA INDEX NAME)

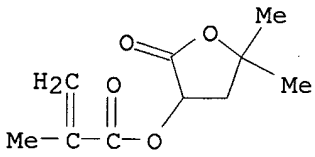
CM 1

CRN 430436-77-4
CMF C20 H26 F6 O2



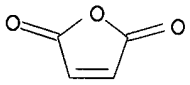
CM 2

CRN 280552-09-2
CMF C10 H14 O4



CM 3

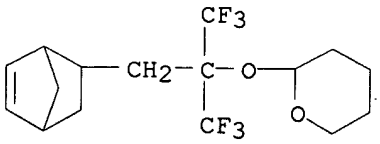
CRN 108-31-6
CMF C4 H2 O3



RN 430436-79-6 HCAPLUS
CN 2H-Pyran, 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

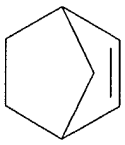
CM 1

CRN 430436-65-0
CMF C16 H20 F6 O2



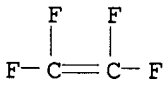
CM 2

CRN 498-66-8
CMF C7 H10



CM 3

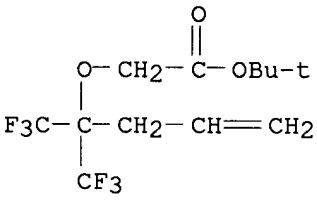
CRN 116-14-3
CMF C2 F4



RN 430436-81-0 HCAPLUS
CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

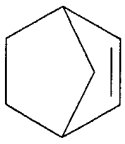
CM 1

CRN 430436-80-9
CMF C12 H16 F6 O3



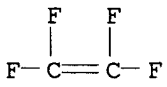
CM 2

CRN 498-66-8
CMF C7 H10



CM 3

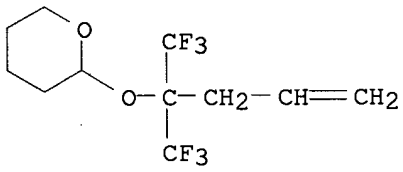
CRN 116-14-3
CMF C2 F4



RN 430436-82-1 HCAPLUS
CN 2H-Pyran, 2-[[1,1-bis(trifluoromethyl)-3-butenyl]oxy]tetrahydro-, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

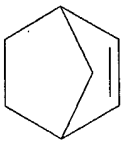
CM 1

CRN 430436-75-2
CMF C11 H14 F6 O2



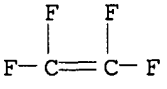
CM 2

CRN 498-66-8
CMF C7 H10



CM 3

CRN 116-14-3
CMF C2 F4

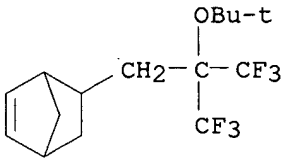


RN 430436-84-3 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 5-[2-(1,1-dimethylethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicycl

o[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

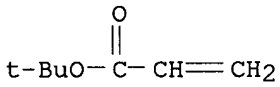
CM 1

CRN 430436-83-2
CMF C15 H20 F6 O



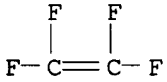
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

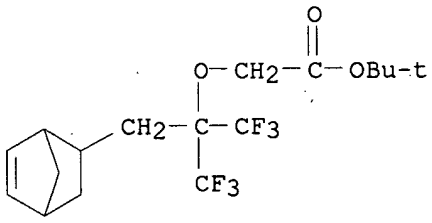
CRN 116-14-3
CMF C2 F4



RN 430436-85-4 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

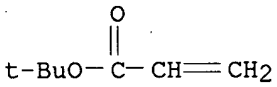
CM 1

CRN 430436-69-4
CMF C17 H22 F6 O3



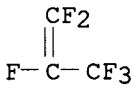
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

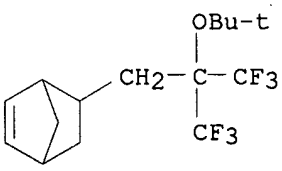
CRN 116-15-4
CMF C3 F6



RN 430436-86-5 HCAPLUS
CN Bicyclo[2.2.1]hept-2-ene, 5-[2-(1,1-dimethylethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]-, polymer with bicyclo[2.2.1]hept-2-ene and trifluoro(pentafluoroethoxy)ethene (9CI) (CA INDEX NAME)

CM 1

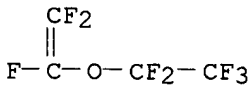
CRN 430436-83-2
CMF C15 H20 F6 O



CM 2

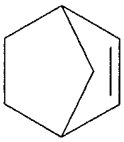
CRN 10493-43-3

CMF C4 F8 O



CM 3

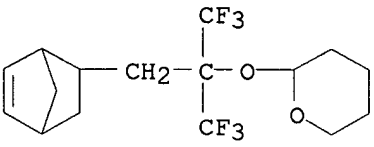
CRN 498-66-8
CMF C7 H10



RN 430436-87-6 HCAPLUS
CN 1,3-Dioxole, 2,2,4,5-tetrafluoro-, polymer with bicyclo[2.2.1]hept-2-ene and 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

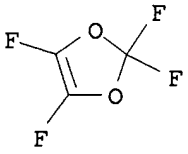
CM 1

CRN 430436-65-0
CMF C16 H20 F6 O2



CM 2

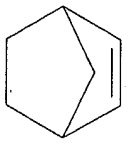
CRN 86179-30-8
CMF C3 F4 O2



CM 3

CRN 498-66-8

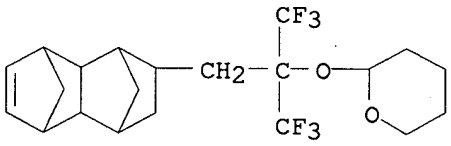
CMF C7 H10



RN 430436-89-8 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 2-[1-[(1,2,3,4,4a,5,8,8a-octahydro-1,4:5,8-dimethanonaphthalen-2-yl)methyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran and tetrafluoroethene (9CI) (CA INDEX NAME)

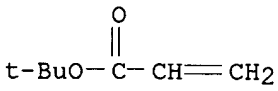
CM 1

CRN 430436-88-7
CMF C21 H26 F6 O2



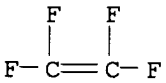
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

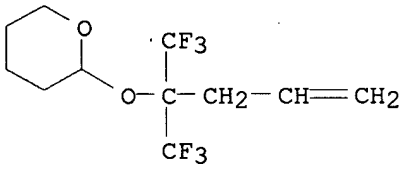
CRN 116-14-3
CMF C2 F4



RN 430436-90-1 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2-[[1,1-bis(trifluoromethyl)-3-butenyl]oxy]tetrahydro-2H-pyran and tetrafluoroethene (9CI) (CA INDEX NAME)

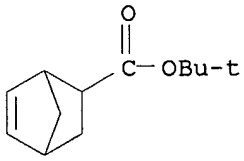
CM 1

CRN 430436-75-2
CMF C11 H14 F6 O2



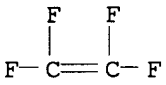
CM 2

CRN 154970-45-3
CMF C12 H18 O2



CM 3

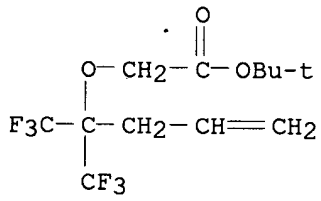
CRN 116-14-3
CMF C2 F4



RN 430436-91-2 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene, 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and tetrafluoroethene (9CI) (CA INDEX NAME)

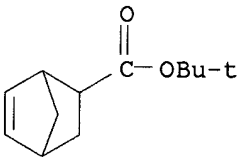
CM 1

CRN 430436-80-9
CMF C12 H16 F6 O3



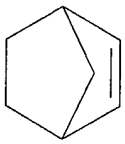
CM 2

CRN 154970-45-3
CMF C12 H18 O2



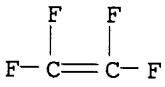
CM 3

CRN 498-66-8
CMF C7 H10



CM 4

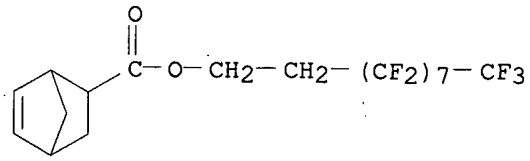
CRN 116-14-3
CMF C2 F4



RN 430436-92-3 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran and 2,5-furandione (9CI) (CA INDEX NAME)

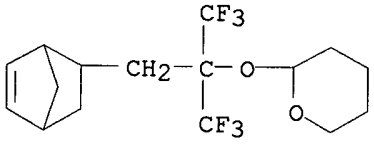
CM 1

CRN 430436-73-0
CMF C18 H13 F17 O2



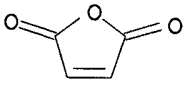
CM 2

CRN 430436-65-0
CMF C16 H20 F6 O2



CM 3

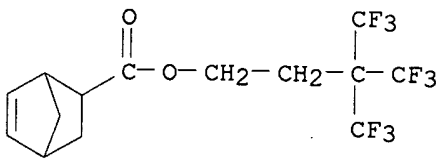
CRN 108-31-6
CMF C4 H2 O3



RN 430436-94-5 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyl ester, polymer with 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

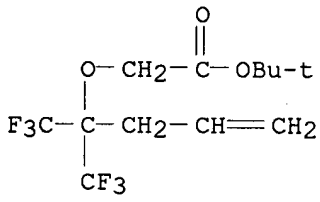
CM 1

CRN 430436-93-4
CMF C14 H13 F9 O2



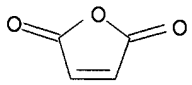
CM 2

CRN 430436-80-9
CMF C12 H16 F6 O3



CM 3

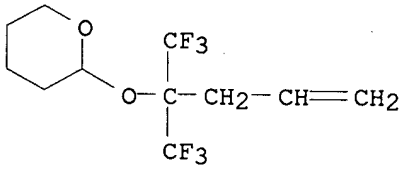
CRN 108-31-6
CMF C4 H2 O3



RN 430436-95-6 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with 2-[[1,1-bis(trifluoromethyl)-3-butenyl]oxy]tetrahydro-2H-pyran, 1,1-dimethylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

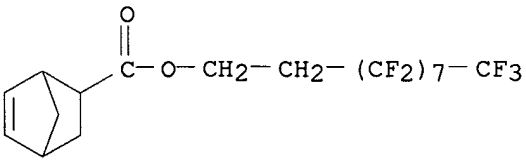
CM 1

CRN 430436-75-2
CMF C11 H14 F6 O2



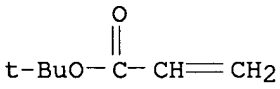
CM 2

CRN 430436-73-0
CMF C18 H13 F17 O2



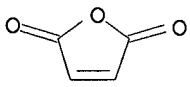
CM 3

CRN 1663-39-4
CMF C7 H12 O2



CM 4

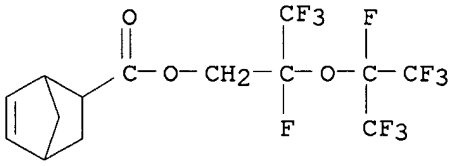
CRN 108-31-6
CMF C4 H2 O3



RN 430436-97-8 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2,3,3,3-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethoxy]propyl ester, polymer with 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran, 1,1-dimethylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

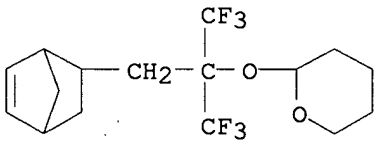
CRN 430436-96-7
CMF C14 H11 F11 O3



CM 2

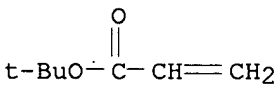
CRN 430436-65-0

CMF C16 H20 F6 O2



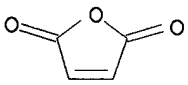
CM 3

CRN 1663-39-4
CMF C7 H12 O2



CM 4

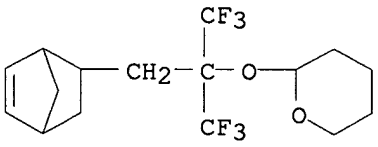
CRN 108-31-6
CMF C4 H2 O3



RN 430436-98-9 HCAPLUS
CN 2,5-Furandione, polymer with 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran and 5-(trifluoromethyl)bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

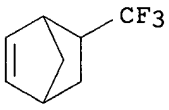
CM 1

CRN 430436-65-0
CMF C16 H20 F6 O2



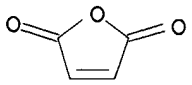
CM 2

CRN 445-20-5
CMF C8 H9 F3



CM 3

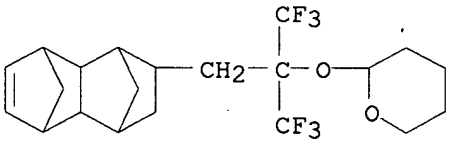
CRN 108-31-6
CMF C4 H2 O3



RN 430436-99-0 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with 1,1-dimethylethyl 2-propenoate, 2,5-furandione and tetrahydro-2-[2,2,2-trifluoro-1-[(1,2,3,4,4a,5,8,8a-octahydro-1,4:5,8-dimethanonaphthalen-2-yl)methyl]-1-(trifluoromethyl)ethoxy]-2H-pyran (9CI) (CA INDEX NAME)

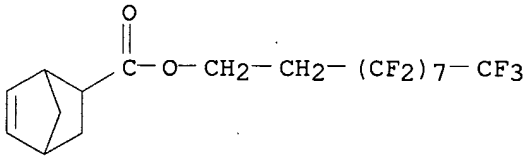
CM 1

CRN 430436-88-7
CMF C21 H26 F6 O2



CM 2

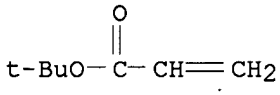
CRN 430436-73-0
CMF C18 H13 F17 O2



CM 3

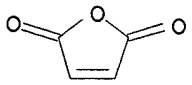
CRN 1663-39-4

CMF C7 H12 O2



CM 4

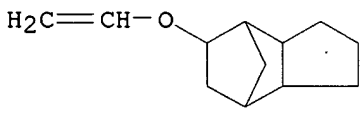
CRN 108-31-6
CMF C4 H2 O3



RN 430437-09-5 HCAPLUS
CN 2H-Pyran, 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-, polymer with 5-(ethenyloxy)octahydro-4,7-methano-1H-indene and tetrafluoroethene (9CI) (CA INDEX NAME)

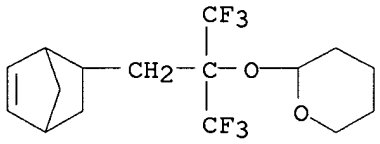
CM 1

CRN 430437-08-4
CMF C12 H18 O



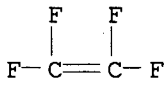
CM 2

CRN 430436-65-0
CMF C16 H20 F6 O2



CM 3

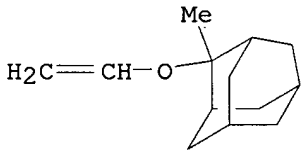
CRN 116-14-3
CMF C2 F4



RN 430437-11-9 HCAPLUS
CN 2,5-Furandione, polymer with .alpha.,.alpha.-bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 2-(ethenyloxy)-2-methyltricyclo[3.3.1.13,7]decane (9CI) (CA INDEX NAME)

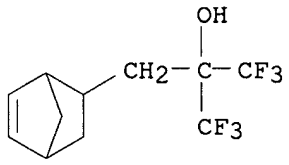
CM 1

CRN 430437-10-8
CMF C13 H20 O



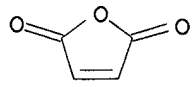
CM 2

CRN 196314-61-1
CMF C11 H12 F6 O



CM 3

CRN 108-31-6
CMF C4 H2 O3

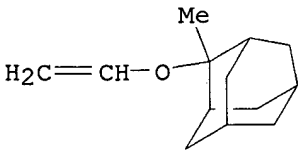


RN 430437-12-0 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 2-(ethenyloxy)-2-methyltricyclo[3.3.1.13,7]decane and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

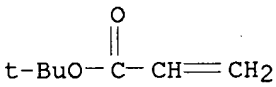
CRN 430437-10-8

CMF C13 H20 O



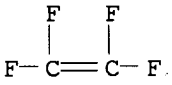
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

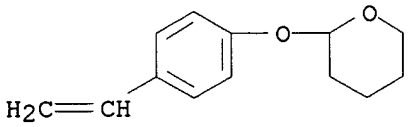
CRN 116-14-3
CMF C2 F4



RN 430437-13-1 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

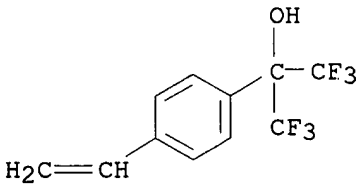
CM 1

CRN 65409-15-6
CMF C13 H16 O2



CM 2

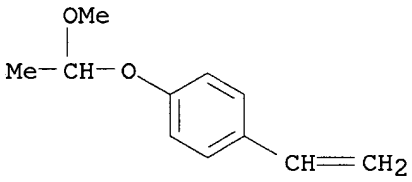
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-14-2 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-ethenyl-4-(1-methoxyethoxy)benzene (9CI) (CA INDEX NAME)

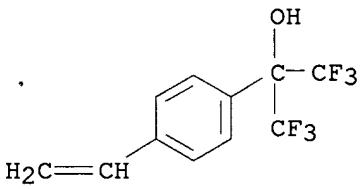
CM 1

CRN 151189-10-5
CMF C11 H14 O2



CM 2

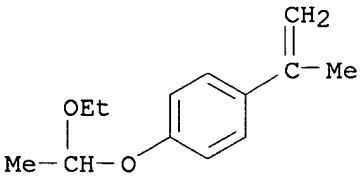
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-15-3 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1-ethoxyethoxy)-4-(1-methylethenyl)benzene (9CI) (CA INDEX NAME)

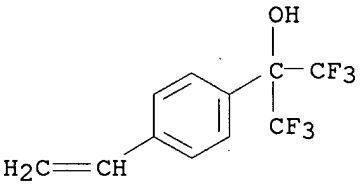
CM 1

CRN 216573-39-6
CMF C13 H18 O2



CM 2

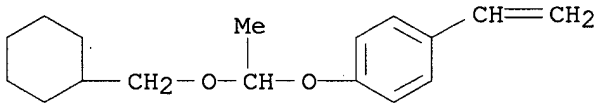
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-17-5 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-[1-(cyclohexylmethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

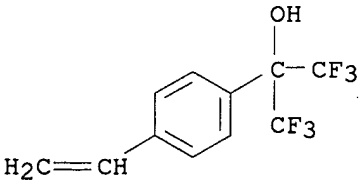
CM 1

CRN 430437-16-4
CMF C17 H24 O2



CM 2

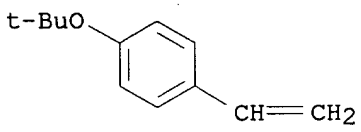
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-18-6 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

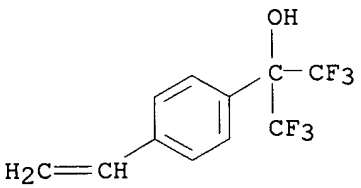
CM 1

CRN 95418-58-9
CMF C12 H16 O



CM 2

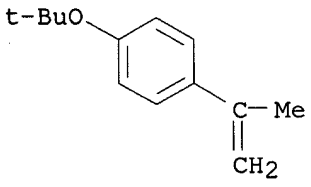
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-19-7 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-(1-methylethenyl)benzene (9CI) (CA INDEX NAME)

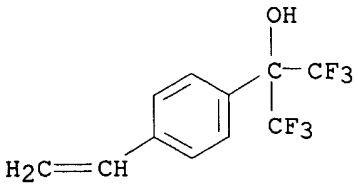
CM 1

CRN 105612-78-0
CMF C13 H18 O



CM 2

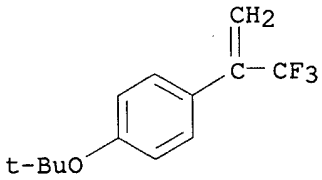
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-21-1 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-[1-(trifluoromethyl)ethenyl]benzene (9CI) (CA INDEX NAME)

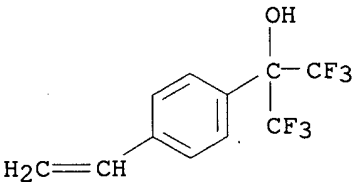
CM 1

CRN 430437-20-0
CMF C13 H15 F3 O



CM 2

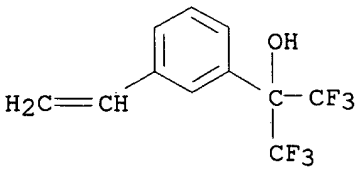
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-22-2 HCAPLUS
CN Benzenemethanol, 3-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

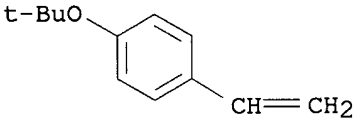
CM 1

CRN 122056-08-0
CMF C11 H8 F6 O



CM 2

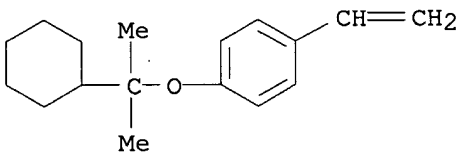
CRN 95418-58-9
CMF C12 H16 O



RN 430437-24-4 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.-methyl-.alpha.-(trifluoromethyl)-, polymer with 1-(1-cyclohexyl-1-methylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

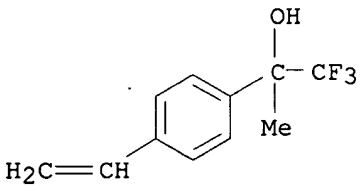
CM 1

CRN 430437-23-3
CMF C17 H24 O



CM 2

CRN 397287-76-2
CMF C11 H11 F3 O

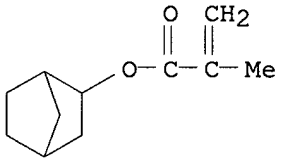


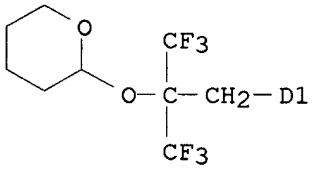
RN 431062-12-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester,

polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

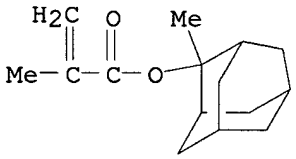
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





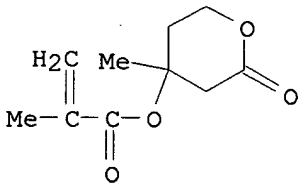
CM 2

CRN 177080-67-0
CMF C15 H22 O2



CM 3

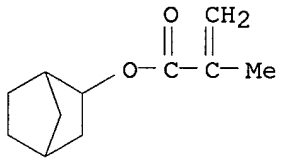
CRN 177080-66-9
CMF C10 H14 O4

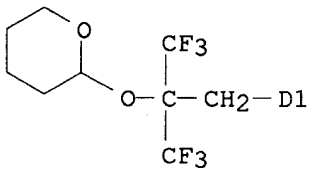


RN 431062-14-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with tetrahydro-2H-pyran-2-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

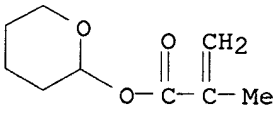
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





CM 2

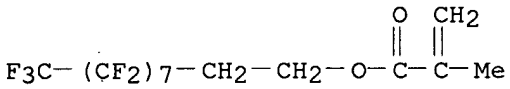
CRN 52858-59-0
CMF C9 H14 O3



CM 3

CRN 1996-88-9

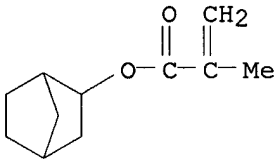
CMF C14 H9 F17 O2

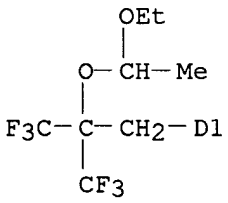


RN 431062-16-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 5(or 6)-[2-(1-ethoxyethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester polymer with 1-ethenyl-4-[1-(1-ethoxyethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

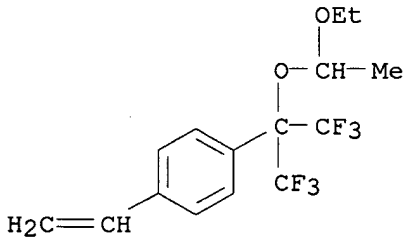
CRN 431062-15-6
CMF C19 H26 F6 O4
CCI IDS





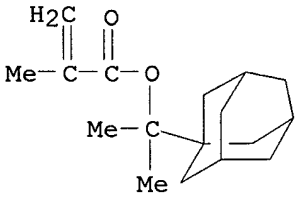
CM 2

CRN 430437-00-6
CMF C15 H16 F6 O2



CM 3

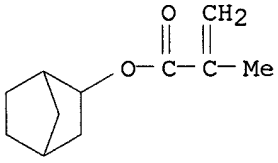
CRN 279218-76-7
CMF C17 H26 O2

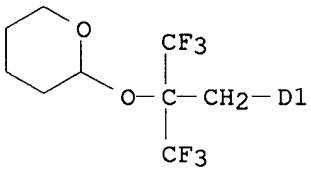


RN 431062-17-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate, tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

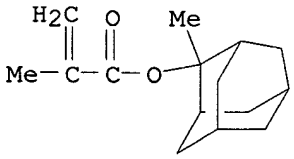
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





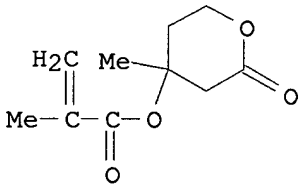
CM 2

CRN 177080-67-0
CMF C15 H22 O2



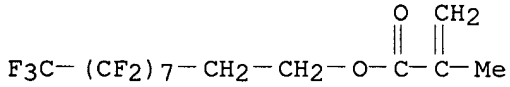
CM 3

CRN 177080-66-9
CMF C10 H14 O4



CM 4

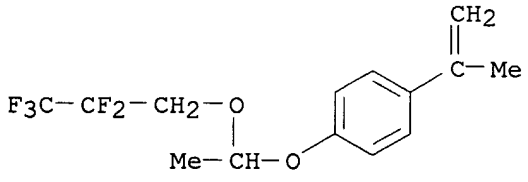
CRN 1996-88-9
CMF C14 H9 F17 O2



RN 503003-64-3 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1-methylethenyl)-4-[1-(2,2,3,3,3-pentafluoropropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

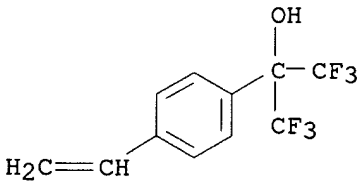
CM 1

CRN 503003-63-2
CMF C14 H15 F5 O2



CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



L38 ANSWER 3 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2003:20985 HCAPLUS
DN 138:98193
TI Positive resist **composition**
IN Mizutani, Kazuyoshi; Kanna, Shinichi
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 93 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1273969	A2	20030108	EP 2002-14079	20020701
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	JP 2003015297	A2	20030115	JP 2001-202240	20010703
	JP 2003015299	A2	20030115	JP 2001-202242	20010703
	JP 2003015300	A2	20030115	JP 2001-202243	20010703
PRAI	JP 2001-202240	A	20010703		
	JP 2001-202242	A	20010703		
	JP 2001-202243	A	20010703		

AB A pos. resist **compn.** comprises (A) a resin which comprises a specified repeating units and (B) a compd. capable of generating an acid upon irradn. with one of an actinic ray and a radiation. The present invention relates to a pos. resist **compn.** capable of forming fine patterns with use of a vacuum UV ray having a wavelength .ltoreq. 160 nm.

ST pos photoresist resin **compn** photolithog
IT Positive **photoresists**
(pos. resist **compn.** for vacuum UV photolithog.)
IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos. resist **compn.** for vacuum UV photolithog. contg.)
IT Photolithography
(vacuum UV; pos. resist **compn.** for vacuum UV)
IT **430437-22-2P** 430437-35-7P **479073-24-0P**
483348-64-7P 483348-65-8P 483348-66-9P

483348-67-0P 483348-68-1P 483348-69-2P
483348-70-5P 483348-71-6P **483348-72-7P**
483348-73-8P 483348-74-9P 483348-75-0P
483348-76-1P 483348-78-3P 483348-80-7P
483348-81-8P 483348-83-0P 483348-85-2P 483348-86-3P
483348-88-5P 483348-90-9P 483348-91-0P
483348-92-1P 483348-93-2P 483348-94-3P
483348-96-5P 483348-97-6P 483348-98-7P
483348-99-8P 483349-01-5P 483349-02-6P
483349-04-8P **483349-06-0P 483349-08-2P**
483349-10-6P 483349-11-7P 483349-12-8P
483349-13-9P 483349-15-1P 483349-16-2P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **resist compn**. for vacuum UV photolithog. contg.)

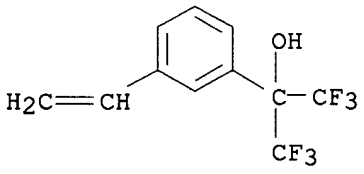
IT 9016-45-9, Polyoxyethylene nonyl phenyl ether 137462-24-9, Megafac F 176
216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos. resist **compn**. for vacuum UV photolithog. contg.)

IT **430437-22-2P 479073-24-0P 483348-64-7P**
483348-65-8P 483348-66-9P 483348-67-0P
483348-68-1P 483348-69-2P 483348-70-5P
483348-72-7P 483348-73-8P 483348-74-9P
483348-75-0P 483348-76-1P 483348-78-3P
483348-80-7P 483348-81-8P 483348-88-5P
483348-90-9P 483348-91-0P 483348-92-1P
483348-93-2P 483348-94-3P 483348-96-5P
483348-97-6P 483348-98-7P 483348-99-8P
483349-01-5P 483349-02-6P 483349-06-0P
483349-08-2P 483349-10-6P 483349-11-7P
483349-12-8P 483349-13-9P 483349-15-1P
483349-16-2P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **resist compn**. for vacuum UV photolithog. contg.)

RN 430437-22-2 HCAPLUS
CN Benzenemethanol, 3-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

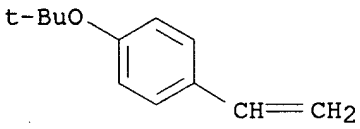
CM 1

CRN 122056-08-0
CMF C11 H8 F6 O



CM 2

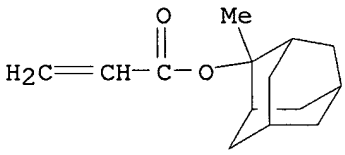
CRN 95418-58-9
CMF C12 H16 O



RN 479073-24-0 HCAPLUS
CN 2-Propenoic acid, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

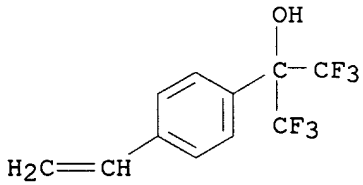
CM 1

CRN 249562-06-9
CMF C14 H20 O2



CM 2

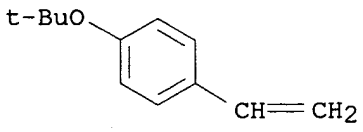
CRN 2386-82-5
CMF C11 H8 F6 O



RN 483348-64-7 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

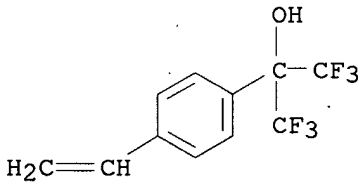
CM 1

CRN 95418-58-9
CMF C12 H16 O



CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

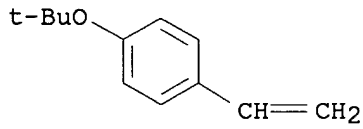
CRN 100-42-5
CMF C8 H8

H2C═CH—Ph

RN 483348-65-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

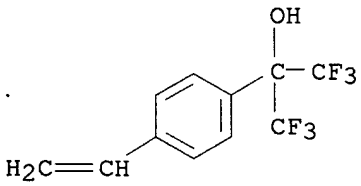
CM 1

CRN 95418-58-9
CMF C12 H16 O



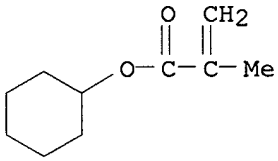
CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

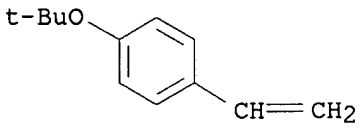
CRN 101-43-9
CMF C10 H16 O2



RN 483348-66-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, tricyclo[3.3.1.13,7]dec-1-yl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

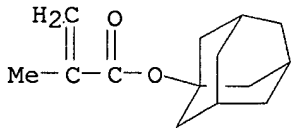
CM 1

CRN 95418-58-9
CMF C12 H16 O



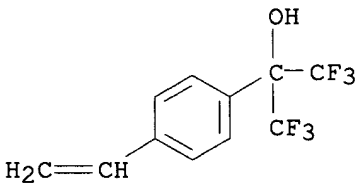
CM 2

CRN 16887-36-8
CMF C14 H20 O2



CM 3

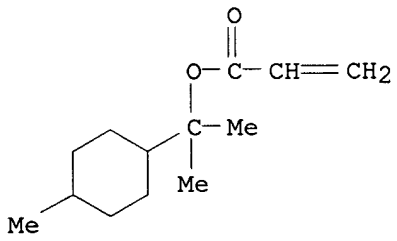
CRN 2386-82-5
CMF C11 H8 F6 O



RN 483348-67-0 HCAPLUS
CN 2-Propenoic acid, 1-methyl-1-(4-methylcyclohexyl)ethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

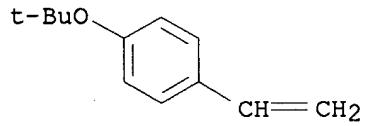
CM 1

CRN 342648-11-7
CMF C13 H22 O2



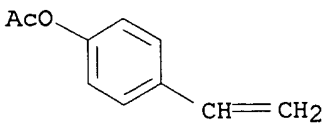
CM 2

CRN 95418-58-9
CMF C12 H16 O



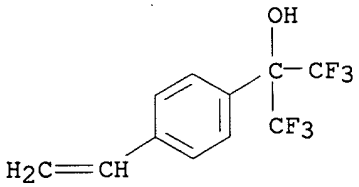
CM 3

CRN 2628-16-2
CMF C10 H10 O2



CM 4

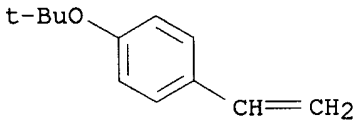
CRN 2386-82-5
CMF C11 H8 F6 O



RN 483348-68-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and phenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

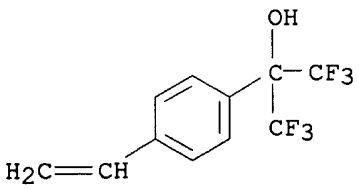
CM 1

CRN 95418-58-9
CMF C12 H16 O



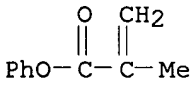
CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



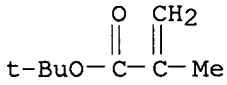
CM 3

CRN 2177-70-0
CMF C10 H10 O2



CM 4

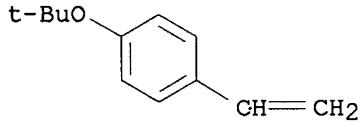
CRN 585-07-9
CMF C8 H14 O2



RN 483348-69-2 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

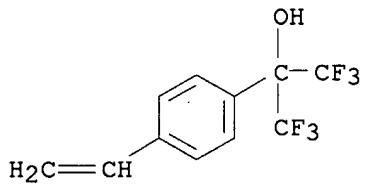
CM 1

CRN 95418-58-9
CMF C12 H16 O



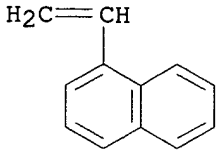
CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

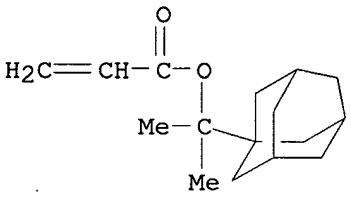
CRN 826-74-4
CMF C12 H10



RN 483348-70-5 HCAPLUS
CN 2-Propenoic acid, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with 1-(1,1-dimethylethyl)-4-ethenylbenzene and 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

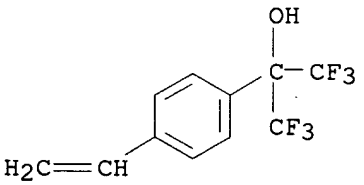
CM 1

CRN 300833-10-7
CMF C16 H24 O2



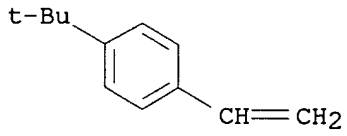
CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

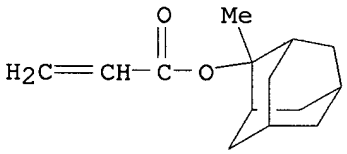
CRN 1746-23-2
CMF C12 H16



RN 483348-72-7 HCAPLUS
CN 2-Propenoic acid, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and (1-methylethenyl)benzene (9CI) (CA INDEX NAME)

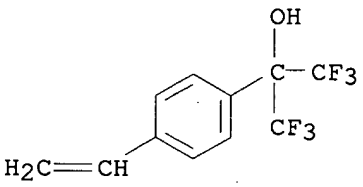
CM 1

CRN 249562-06-9
CMF C14 H20 O2



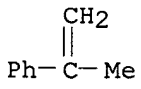
CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

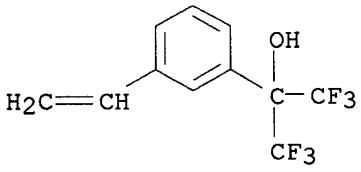
CRN 98-83-9
CMF C9 H10



RN 483348-73-8 HCAPLUS
CN Benzenemethanol, 3-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

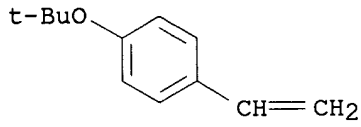
CM 1

CRN 122056-08-0
CMF C11 H8 F6 O



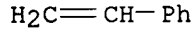
CM 2

CRN 95418-58-9
CMF C12 H16 O



CM 3

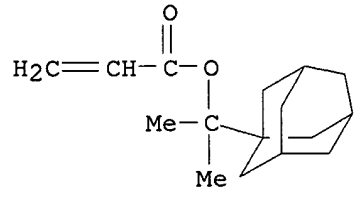
CRN 100-42-5
CMF C8 H8



RN 483348-74-9 HCAPLUS
CN 2-Propenoic acid, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

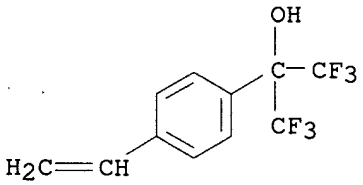
CM 1

CRN 300833-10-7
CMF C16 H24 O2



CM 2

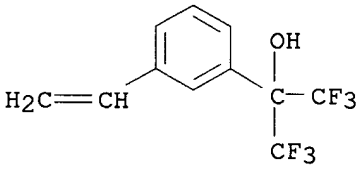
CRN 2386-82-5
CMF C11 H8 F6 O



RN 483348-75-0 HCAPLUS
CN Benzenemethanol, 3-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and ethenylpentafluorobenzene (9CI) (CA INDEX NAME)

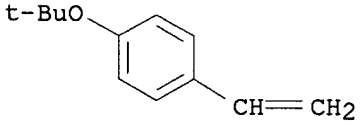
CM 1

CRN 122056-08-0
CMF C11 H8 F6 O



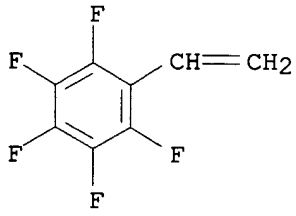
CM 2

CRN 95418-58-9
CMF C12 H16 O



CM 3

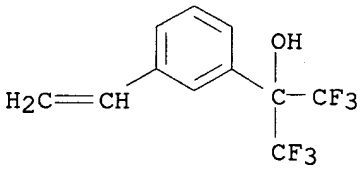
CRN 653-34-9
CMF C8 H3 F5



RN 483348-76-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2,2-trifluoroethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 3-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

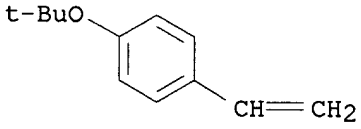
CM 1

CRN 122056-08-0
CMF C11 H8 F6 O



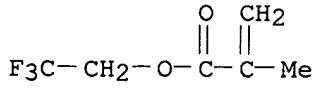
CM 2

CRN 95418-58-9
CMF C12 H16 O



CM 3

CRN 352-87-4
CMF C6 H7 F3 O2

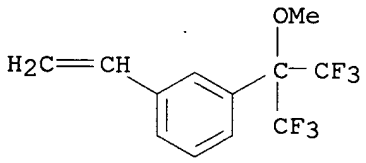


RN 483348-78-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylpropyl ester, polymer with 3-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and

1-ethenyl-3-[2,2,2-trifluoro-1-methoxy-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

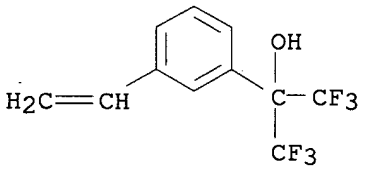
CM 1

CRN 483348-77-2
CMF C12 H10 F6 O



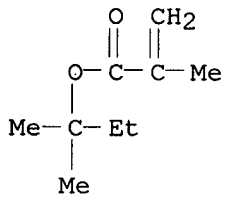
CM 2

CRN 122056-08-0
CMF C11 H8 F6 O



CM 3

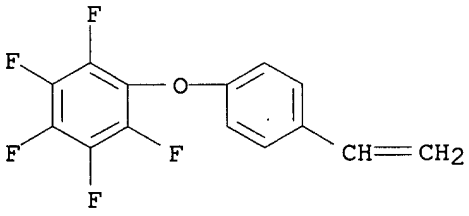
CRN 7383-24-6
CMF C9 H16 O2



RN 483348-80-7 HCAPLUS
CN 2-Propenoic acid, 1-methyl-1-(4-methylcyclohexyl)ethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and (4-ethenylphenoxy)pentafluorobenzene (9CI) (CA INDEX NAME)

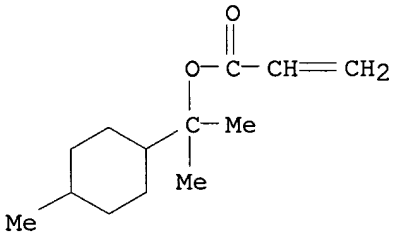
CM 1

CRN 483348-79-4
CMF C14 H7 F5 O



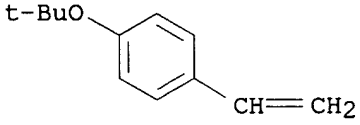
CM 2

CRN 342648-11-7
CMF C13 H22 O2



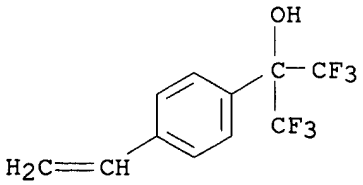
CM 3

CRN 95418-58-9
CMF C12 H16 O



CM 4

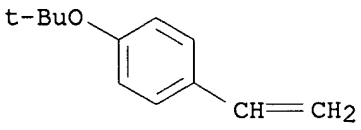
CRN 2386-82-5
CMF C11 H8 F6 O



RN 483348-81-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and 3,3,4,4,5,5,6,6,6-nonafluorohexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

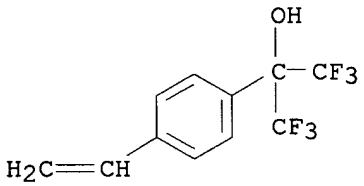
CM 1

CRN 95418-58-9
CMF C12 H16 O



CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

CRN 1799or polyalicyclic hydrocarbyl structure
and being decomposable by acid to become dissolvable in alkali developing soln., and (C) an arom. carboxylic acid with protective group. Thus, adding over 4 h a soln. of 2-methyl-2-adamantyl methacrylate 5.0, mevalonic lactone methacrylate 4.23, V-65 (azo radical initiator) 0.534 and AcNMe2 30.0 to AcNMe2 7.0 g heated at 60.degree., reacting for 2 h, further adding 0.267 V-650, reacting for 2 h and working up gave a copolymer with Mw 5500 and Mw/Mn 1.9. Mixing 9.0 parts the copolymer with triphenylsulfonium triflate 0.1, tetrahydro-2-pyranyl benzoate 1.0, 1,5-diazabicyclo[4.3.0]-5-nonene 0.005 and Megafac **F** 176 (**surfactant**) 0.01 parts, dilg. in propylene glycol monomethyl ether acetate to a solids content of 15%, filtering, spin coating on a silane-primed Si wafer, and drying at 120.degree. for 90 s gave a **photoresist** layer which was then patterned using a photomask and ArF excimer laser stepper and developed with tetramethylammonium hydroxide to give patterns with good resoln.

ST resoln sensitivity pos working **photoresist** acid **generator** crosslinking catalyst

IT Crosslinking catalysts
(acid-**generating** compds.; pos.-working **photoresists** with high sensitivity and good resoln. on development)

IT Acids, uses
RL: CAT (Catalyst use); USES (Uses)
(crosslinking catalysts; pos.-working **photoresists** with high sensitivity and good resoln. on development)
IT Positive **photoresists**
Printed circuit boards
Surfactants
(pos.-working **photoresists** with high sensitivity and good resoln. on development)
IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresists** with high sensitivity and good resoln. on development)
IT 66003-78-9, Triphenylsulfonium triflate 144089-15-6, Triphenylsulfonium perfluorooctanesulfonate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate 194999-85-4, Bis(4-tert-butylphenyl)iodonium perfluorobutanesulfonate
RL: CAT (Catalyst use); USES (Uses)
(acid-**generating** agent; pos.-working **photoresists** with high sensitivity and good resoln. on development)
IT 177080-68-1P, 2-Methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 195000-67-0P 195154-83-7P 216308-45-1P, Methacrylic acid-2-methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 288303-55-9P 297156-40-2P 304441-22-3P 307976-24-5P 324770-96-9P 357413-69-5P 357413-70-8P 357413-71-9P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working **photoresists** with high sensitivity and good resoln. on development)
IT 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1,8-Diazabicyclo[5.4.0]undecene-7 16537-09-0 33155-60-1 33155-61-2 62381-17-3 70363-80-3 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08 364039-09-8, Troysol S 336 410537-59-6 457930-94-8
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresists** with high sensitivity and good resoln. on development)
IT 75-65-0, tert-Butanol, reactions 104-01-8, p-Methoxyphenylacetic acid 110-87-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for benzoic acid derivs.; pos.-working **photoresists** with high sensitivity and good resoln. on development)

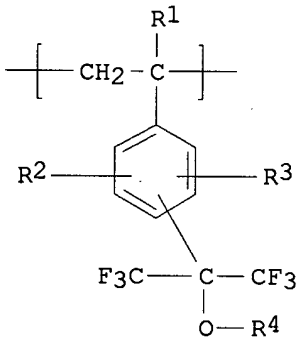
L38 ANSWER 13 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:734053 HCAPLUS
DN 137:270514
TI Positive resist **composition** containing resin and photoacid generator
IN Aoai, Toshiaki; Mizutani, Kazuyoshi; Kanna, Shinichi
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 51 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G03F007-004
ICS G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1243968	A2	20020925	EP 2002-6528	20020319
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002351081	A2	20021204	JP 2002-74337	20020318
	US 2002168584	A1	20021114	US 2002-99981	20020319
PRAI	JP 2001-79184	A	20010319		

GI



I

AB The present invention relates to a pos. resist **compn.** used in micro-lithog processes for the manuf. of VLSI's and micro-tips with large capacities. The present invention relates to a pos. resist **compn**. capable of forming fine patterns with use of a vacuum UV ray having a wavelength of < 160 nm. A pos. resist **compn.** comprises: (A) a resin contg. a specified repeating unit I (R1 = H, halogen atom, cyano group, alkyl; R2,3 = H, hydroxy group, halogen atom, cyano, alkoxy, acyl, alkyl, cycloalkyl, alkenyl, aralkyl, aryl; R4 = H, alkyl, perfluoroalkyl, cycloalkyl, acyl, alkoxyacrbonyl, etc.), which is capable of decompg. by the action of an acid to increase the soly. in an alkali developer; and (B) a compd. capable of generating an acid upon irradn. with one of an actinic ray and a radiation.

ST photoresist photolithog resin **surfactant**

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(KR 341, **surfactant**; resin and acid generator for pos. resist **compn.**)

IT Positive **photoresists**
(resin and acid generator for pos. resist **compn.**)

IT Photolithography
(vacuum UV; resin and acid generator for pos. resist **compn.** for)

IT 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate 324771-13-3
RL: TEM (Technical or engineered material use); USES (Uses)
(photoacid generator; resin and acid generator for pos. resist **compn.**)

IT 430437-07-3P 462109-80-4DP, reaction products with Et vinyl ether
462109-81-5P 462109-83-7P **462109-85-9P** 462109-87-1P
462109-89-3P 462109-91-7P **462109-92-8P 462109-94-0P**
462109-95-1P **462109-97-3P**
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(resin and acid generator for pos. **resist compn.**)

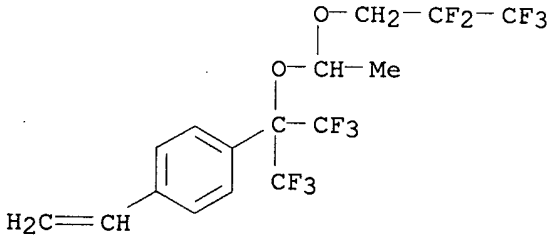
IT 9016-45-9, Polyoxyethylene nonylphenyl ether 137462-24-9, Megafac f176
216679-67-3, Megafac R08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; resin and acid generator for pos. resist **compn.**)

IT **462109-85-9P 462109-92-8P 462109-94-0P**
462109-97-3P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(resin and acid generator for pos. **resist compn.**)

RN 462109-85-9 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-ethenyl-4-[2,2,2-trifluoro-1-[1-(2,2,3,3,3-pentafluoropropoxy)ethoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

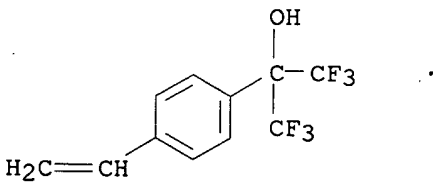
CM 1

CRN 462109-84-8
CMF C16 H13 F11 O2



CM 2

CRN 2386-82-5
CMF C11 H8 F6 O

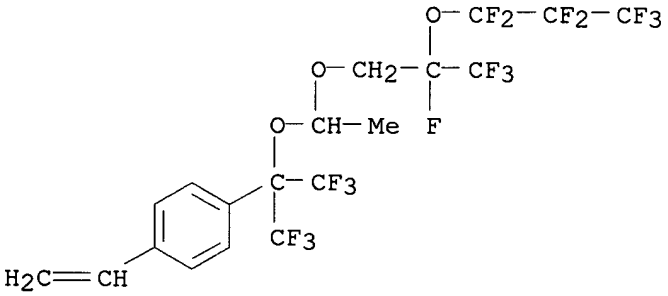


RN 462109-92-8 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer

with 1-ethenyl-4-[2,2,2-trifluoro-1-[1-[2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propoxy]ethoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

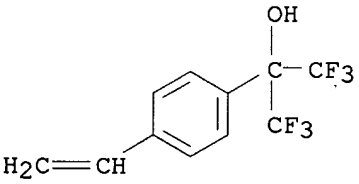
CM 1

CRN 462109-86-0
CMF C19 H13 F17 O3



CM 2

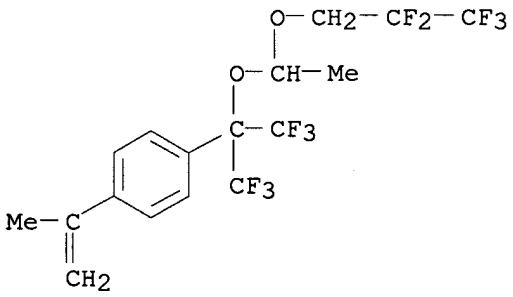
CRN 2386-82-5
CMF C11 H8 F6 O



RN 462109-94-0 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 1-(1-methylethenyl)-4-[2,2,2-trifluoro-1-[1-(2,2,3,3,3-pentafluoropropoxy)ethoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

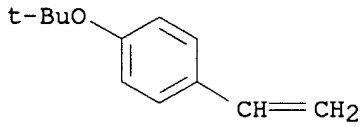
CM 1

CRN 462109-93-9
CMF C17 H15 F11 O2



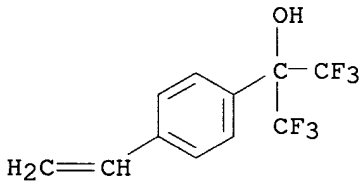
CM 2

CRN 95418-58-9
CMF C12 H16 O



CM 3

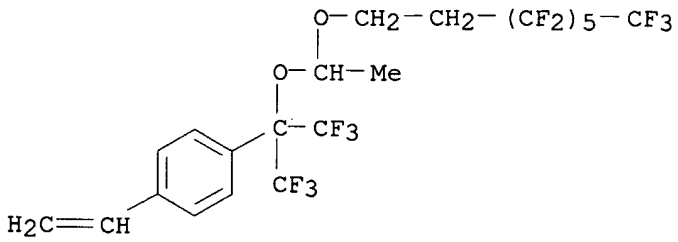
CRN 2386-82-5
CMF C11 H8 F6 O



RN 462109-97-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and 1-ethenyl-4-[2,2,2-trifluoro-1-[1-[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy]ethoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

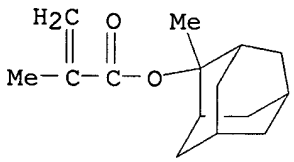
CM 1

CRN 462109-96-2
CMF C21 H15 F19 O2



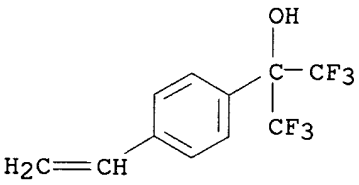
CM 2

CRN 177080-67-0
CMF C15 H22 O2



CM 3

CRN 2386-82-5
CMF C11 H8 F6 O



L38 ANSWER 14 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:673047 HCAPLUS
DN 137:224108
TI Storage-stable excimer laser-sensitive positive-working photosensitive **compositions** with reduced pattern variation on defocusing
IN Kodama, Kunihiko; Sato, Kenichiro
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 86 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08K005-36; C08L101-00; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and

Other Reprographic Processes)

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002251012	A2	20020906	JP 2001-48784	20010223
	US 2003017415	A1	20030123	US 2002-79414	20020222
PRAI	JP 2001-48602	A	20010223		
	JP 2001-48783	A	20010223		
	JP 2001-48784	A	20010223		
	JP 2001-48880	A	20010223		
	JP 2001-157366	A	20010525		
	JP 2001-157367	A	20010525		

AB The **compns.** comprise (A) **photoacid generators**, (B) resins contg. alicyclic hydrocarbon structures, which increase their alkali soly. by acid decompn., (C) base compds., and (D) fluoro- and/or silicone-based surfactants, wherein the **photoacid generator** is a mixt. of triarylsulfonium salts and non-arom. sulfonium salts. The **compns.** are useful for chem. amplified **photoresists** suitable for halftone phase-shift masks.

ST pos **photoresist** excimer laser storage stability; chem amplification **photoresist** arylsulfonium **photoacid generator**

IT Positive **photoresists**
(UV; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT Sulfonium compounds
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(arene, **photoacid generators**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT **Surfactants**
(**fluorosurfactants**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT Cycloalkenes
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymers; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT Aromatic compounds
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(sulfonium, **photoacid generators**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 66003-78-9 144317-44-2 177034-80-9 258872-05-8 284474-28-8 338445-24-2 391232-40-9 398141-18-9 421555-72-8
RL: CAT (Catalyst use); USES (Uses)
(arom. sulfonyl **photoacid generator**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 484-47-9, 2,4,5-Triphenylimidazole 621-77-2, Tripentylamine 3001-72-7,

1,5-Diazabicyclo[4.3.0]non-5-ene 3040-44-6, 1-Piperidineethanol 19293-63-1, Dicyclohexylmethylamine 19600-49-8, Triphenylsulfonium acetate
RL: TEM (Technical or engineered material use); USES (Uses)
(base compd.; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 3744-08-9P, Triphenylsulfonium iodide 303177-16-4P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer 288303-55-9P 364736-22-1P 391232-36-3P 391613-77-7P
398140-36-8P 398140-38-0P 398140-40-4P 398140-43-7P 398140-45-9P
398140-50-6P 398140-52-8P 398140-54-0P 398140-55-1P 398140-57-3P
398140-59-5P 398140-60-8P 398140-62-0P 398140-64-2P 398140-65-3P
398140-68-6P 398140-69-7P 398140-71-1P 398140-72-2P 398140-73-3P
398140-74-4P 398140-75-5P 398140-76-6P 398140-77-7P 398140-78-8P
398140-79-9P 398140-80-2P 398140-81-3P 398140-82-4P 398140-84-6P
398140-85-7P 398140-86-8P 398140-87-9P 398140-88-0P, tert-Butyl norbornenecarboxylate-maleic anhydride-2-methyl-2-adamantyl acrylate-norbornenelactone acrylate copolymer 398140-89-1P
398140-90-4P 398140-91-5P 398140-92-6P 398140-93-7P 398140-94-8P
398140-95-9P 398140-97-1P 398140-98-2P 398140-99-3P 398141-00-9P
398141-03-2P 398141-04-3P 398141-06-5P 398141-07-6P 398141-08-7P
398141-10-1P 398141-11-2P 398141-13-4P 398141-14-5P 398141-16-7P
398152-52-8P 405509-18-4P 405509-29-7P 405509-30-0P 455521-67-2P
455521-72-9P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 71-43-2, Benzene, reactions 110-01-0, Tetrahydrothiophene 945-51-7, Diphenylsulfoxide 1763-23-1, Perfluorooctanesulfonic acid 5469-26-1, 1-Bromo-3,3-dimethyl-2-butanone 12027-06-4, Ammonium iodide 29420-49-3, Potassium perfluorobutanesulfonate 218151-20-3 455947-79-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 160481-39-0 301153-78-6 371921-65-2 383367-32-6 393171-41-0 455521-76-3 455521-81-0 455521-85-4 455521-89-8
RL: CAT (Catalyst use); USES (Uses)
(non-arom. sulfonyl **photoacid generator**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 171292-12-9
RL: CAT (Catalyst use); USES (Uses)
(**photoacid generator**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 144089-15-6P 241806-75-7P 347193-29-7P
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(**photoacid generator**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 96-48-0, .gamma.-Butyrolactone 97-64-3, Ethyl lactate 108-94-1,

Cyclohexanone, uses 110-43-0, 2-Heptanone 763-69-9 1320-67-8, Propylene glycol methyl ether 84540-57-8, Propylene glycol methyl ether acetate
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; chem. amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

L38 ANSWER 15 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:553401 HCAPLUS
DN 137:132096
TI Positive-working **photoresist composition** containing alkylene glycol alkyl ether
IN Fujimori, Toru; Nakao, Hajime
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 43 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS C08K005-00; C08K005-06; C08K005-16; C08K005-541; C08L101-14; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002207289	A2	20020726	JP 2001-2860	20010110
PRAI	JP 2001-2860		20010110		

OS MARPAT 137:132096
AB The **compn.** contains (A) a compd. generating an acid by actinic ray or radiation, (B) a resin with mono- or poly-cyclic aliph. hydrocarbon structure and its soly. to alk. developer increases by the action of an acid, and (C) R1(OX)mOR2 (R1-2 = linear, branched, or cyclic alkyl; X = linear, branched, or cyclic alkylene; m, l = 1-9). The **compn.** contains (A), (C), (D) dissoln. inhibitor with mol. wt. .ltoreq.3000 having acid-decomposable group and whose soly. to an alk. developer increases by the action of an acid., and (E) a resin insol. in water and sol. in an alk. developer. The **compn.** shows high sensitivity, resoln. and generation of const. wave on **resist** surface is prevented.
ST **photoresist** pos alkali sol resin; acid **generator** dissoln inhibitor **photoresist**; alkylene glycol alkyl ether **photoresist**
IT **Surfactants**
(**fluorosurfactants**; pos. **photoresist** contg. acid **generator**, alkali-sol. polymer, oligo alkylene glycol alkyl ether, and **surfactant**)
IT Positive **photoresists**
(pos. **photoresist** contg. acid **generator**, alkali-sol. polymer and oligo alkylene glycol alkyl ether)
IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)
(**surfactant**; pos. **photoresist** contg. acid **generator**, alkali-sol. polymer, and oligo alkylene glycol alkyl ether)

IT 66003-78-9, Triphenylsulfonium triflate 144089-15-6, Triphenylsulfonium perfluorooctanesulfonate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate 194999-85-4, Bis(4-tert-butylphenyl)iodonium perfluorobutanesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(acid **generator**; pos. **photoresist** contg. acid **generator**, alkali-sol. polymer, and oligo alkylene glycol alkyl ether)

IT 122752-67-4, tert-Butyl cholate
RL: TEM (Technical or engineered material use); USES (Uses)
(dissoln. inhibitor; pos. **photoresist** contg. acid **generator**, alkali-sol. polymer, and oligo alkylene glycol alkyl ether)

IT 112-49-2, 2,5,8,11-Tetraoxadodecane 143-24-8, 2,5,8,11,14-Pentaoxapentadecane 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 4161-38-0 4353-28-0, 3,6,9,12,15-Pentaoxaheptadecane 4499-99-4, 3,6,9,12-Tetraoxatetradecane 5150-79-8, 4,8,12,16-Tetraoxanonadecane 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene 66226-74-2 99106-86-2 443892-52-2
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos. **photoresist** contg. acid **generator**, alkali-sol. polymer, and oligo alkylene glycol alkyl ether)

IT 177080-68-1P, 2-Methyl-2-adamantane methacrylate-mevalonic lactone methacrylate copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **photoresist** contg. acid **generator**, alkali-sol. polymer, and oligo alkylene glycol alkyl ether)

IT 111-96-6 195000-67-0 216308-45-1 288303-55-9 297156-40-2 304441-22-3 307976-24-5 324770-96-9 357413-69-5 443892-46-4 443892-50-0 443892-51-1
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoresist** contg. acid **generator**, alkali-sol. polymer, and oligo alkylene glycol alkyl ether)

IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos. **photoresist** contg. acid **generator**, alkali-sol. polymer, and oligo alkylene glycol alkyl ether)

L38 ANSWER 16 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:447169 HCAPLUS
DN 137:39318
TI Chemically amplified positive-working **photoresists** for vacuum UV exposure
IN Aogo, Toshiaki; Yasunami, Shoichiro
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 50 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039

ICS C08K005-00; C08L101-02; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002169287	A2	20020614	JP 2000-363338	20001129
PRAI	JP 2000-363338		20001129		

AB The **compns.** comprise (A) polymers, which become alkali-sol. by acid decompn., contg. F-substituted structures in a main chain and/or side chains and Si-contg. repeating units and (B) **photoacid generators.** The **photoresists** are particularly suitable for F2 excimer laser exposure.
ST **photoresist** silicon fluoropolymer vacuum UV exposure; chem amplification **photoresist** F2 excimer laser
IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341, **surfactant**; alkali-developable chem. amplified pos.-working **photoresists** for excimer laser exposure)
IT Positive **photoresists**
(UV; alkali-developable chem. amplified pos.-working **photoresists** for excimer laser exposure)
IT **Surfactants**
(**fluorosurfactants**; alkali-developable chem. amplified pos.-working **photoresists** for excimer laser exposure)
IT 437613-53-1P 437613-54-2P 437613-55-3P 437613-56-4P 437613-57-5P
437613-59-7P 437756-96-2P 437770-23-5P 437770-25-7P 437770-26-8P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(alkali-developable chem. amplified pos.-working **photoresists** for excimer laser exposure)
IT 144317-44-2, Triphenylsulfonium nonaflate
RL: CAT (Catalyst use); USES (Uses)
(**photoacid generator**; alkali-developable chem. amplified pos.-working **photoresists** for excimer laser exposure)
IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; alkali-developable chem. amplified pos.-working **photoresists** for excimer laser exposure)

L38 ANSWER 17 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:429222 HCAPLUS
DN 137:13268
TI Bases and **surfactants** and their use in photoresist **compositions** for microlithography
IN Berger, Larry L.; Crawford, Michael Carl; Schadt, Frank L., III; Zumsteg, Fredrick Claus, Jr.
PA E. I. Du Pont De Nemours and Company, USA
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

Section cross-reference(s): 35, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002044814	A2	20020606	WO 2001-US44294	20011126

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	AU 2002028655	A5	20020611	AU 2002-28655	20011126
PRAI	US 2000-253820P	P	20001129		
	WO 2001-US44294	W	20011126		

AB The present invention relates to a photoresist **compn**. having: (1) a polymer selected from the group consisting of: (a) a fluorine-contg. copolymer having a repeat unit derived from at least one ethylenically unsatd. compd. characterized in that at least one ethylenically unsatd. compd. is polycyclic; (b) a branched polymer contg. protected acid groups, said polymer comprising one or more branch segment(s) chem. linked along a linear backbone segment; (c) fluoropolymers having at least one fluoroalc. group having the structure: -C(Rf)(Rf')OH (Rf, Rf' = C1-10 fluoroalkyl groups or taken together are (CF2)n, n = 2-10); (d) amorphous vinyl homopolymers of perfluoro(2,2-dimethyl-1,3-dioxole) or CX2=CY2 (X = F or CF3 and Y = -H) or amorphous vinyl copolymers of perfluoro(2,2-dimethyl-1,3-dioxole) and CX2=CY2; and (e) nitrile/fluoroalc.-contg. polymers prepd. from substituted or unsubstituted vinyl ethers; (2) at least one photoactive component; and (3) a functional compd. selected from the group consisting of a base and a **surfactant**. The polymer may have an absorption coeff. of < 5.0 .mu.m-1 at a wavelength of about 157 nm. These photoresist **compns**. have improved imaging properties.

ST photoresist fluoropolymer base **surfactant** photolithog

IT Photolithography
(UV; bases and **surfactants** and polymer resin for photoresist **compns**. for microlithog.)

IT **Photoresists**
Surfactants
(bases and **surfactants** and polymer resin for photoresist **compns**. for microlithog.)

IT Fluoropolymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(bases and **surfactants** and polymer resin for photoresist **compns**. for microlithog.)

IT 102-71-6, Triethanolamine, uses 768-66-1, 2,2,6,6-Tetramethylpiperidine 1116-76-3, Trioctylamine 2052-49-5, Tetrabutylammonium hydroxide 2403-88-5, 2,2,6,6-Tetramethyl-4-piperidinol 3040-44-6, 1-Piperidineethanol 3088-41-3, 1-Piperidinepropionitrile 3825-26-1, Perfluorooctanoic acid, ammonium salt 4847-93-2, 3-Piperidino-1,2-propanediol 23133-37-1, 1-Propyl-4-piperidone 178324-24-8, Tetrabutylammonium lactate, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(bases and **surfactants** and polymer resin for photoresist **compns**. for microlithog.)

IT **415686-72-5P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)
(prepn. of polymer resin for **photoresist compns.** for microlithog.)

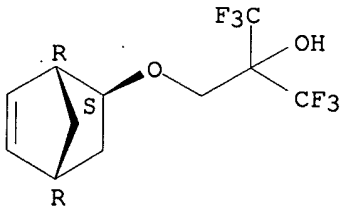
IT 5292-43-3DP, Tert-Butyl bromoacetate, reaction product with hydroxy fluoro norbornene polymer **305815-60-5DP**, reaction product with Bu bromoacetate **305815-60-5P 433713-51-0P** **433713-52-1DP**, reaction product with Bu bromoacetate
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(prepn. of polymer resin for **photoresist compns.** for microlithog.)

IT 2890-98-4, exo-5-Norbornen-2-ol **31898-68-7**, Hexafluoroisobutylene oxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of polymer resin for **photoresist compns.** for microlithog.)

IT **415686-72-5P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of polymer resin for **photoresist compns.** for microlithog.)

RN 415686-72-5 HCAPLUS
CN 2-Propanol, 2-[[(1R,2S,4R)-bicyclo[2.2.1]hept-5-en-2-yloxy]methyl]-1,1,1,3,3,3-hexafluoro-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

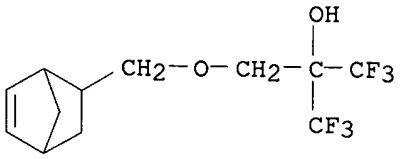


IT **305815-60-5DP**, reaction product with Bu bromoacetate **305815-60-5P 433713-51-0P 433713-52-1DP**, reaction product with Bu bromoacetate
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(prepn. of polymer resin for **photoresist compns.** for microlithog.)

RN 305815-60-5 HCAPLUS
CN 2-Propanol, 2-[(bicyclo[2.2.1]hept-5-en-2-ylmethoxy)methyl]-1,1,1,3,3,3-hexafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

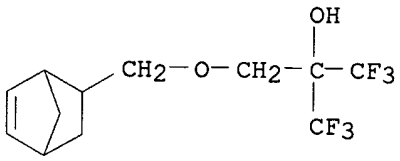
CRN 262617-23-2
CMF C12 H14 F6 O2



RN 305815-60-5 HCAPLUS
CN 2-Propanol, 2-[(bicyclo[2.2.1]hept-5-en-2-ylmethoxy)methyl]-1,1,1,3,3,3-hexafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 262617-23-2
CMF C12 H14 F6 O2

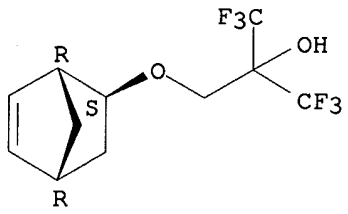


RN 433713-51-0 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with rel-2-[[(1R,2S,4R)-bicyclo[2.2.1]hept-5-en-2-yloxy]methyl]-1,1,1,3,3,3-hexafluoro-2-propanol and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

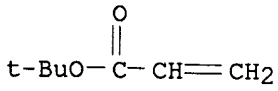
CRN 415686-72-5
CMF C11 H12 F6 O2

Relative stereochemistry.



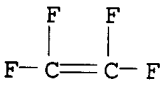
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

CRN 116-14-3
CMF C2 F4

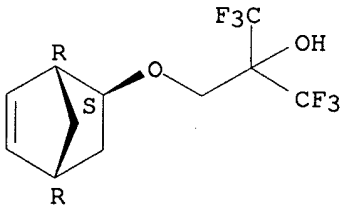


RN 433713-52-1 HCAPLUS
CN 2-Propanol, 2-[[(1R,2S,4R)-bicyclo[2.2.1]hept-5-en-2-yloxy]methyl]-1,1,1,3,3,3-hexafluoro-, rel-, homopolymer (9CI) (CA INDEX NAME)

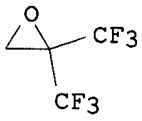
CM 1

CRN 415686-72-5
CMF C11 H12 F6 O2

Relative stereochemistry.



IT **31898-68-7**, Hexafluoroisobutylene oxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of polymer resin for **photoresist compns.** for microlithog.)
RN 31898-68-7 HCAPLUS
CN Oxirane, 2,2-bis(trifluoromethyl)- (9CI) (CA INDEX NAME)



L38 ANSWER 18 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:427822 HCAPLUS
DN 137:13263
TI Positive-working electron beam or x-ray **resist compositions** using specific combination of solvents

IN Uenishi, Kazuya
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 62 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-004; H01L021-027
CC 74-5 (Radiavents)
IT 270564-02-8P, Tetramethylammonium pentafluorobenzenesulfonate
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(**photoacid generator**; pos.-working electron beam or x-ray **resist compns**. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate 258341-98-9P 270563-93-4P 270563-96-7P
RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working electron beam or x-ray **resist compns**. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 270563-92-3 279244-43-8 279244-45-0 389859-77-2 398457-16-4 405893-16-5
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working electron beam or x-ray **resist compns**. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 41440-39-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working electron beam or x-ray **resist compns**. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 484-47-9, 2,4,5-Triphenylimidazole
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(pos.-working electron beam or x-ray **resist compns**. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)
IT 50-21-5D, Lactic acid, alkyl esters 57-55-6D, Propylene glycol, monoalkyl ethers 79-33-4D, alkyl esters 96-48-0, .gamma.-Butyrolactone 96-49-1, Ethylene carbonate 97-64-3, Ethyl lactate 108-32-7, Propylene carbonate 110-43-0, 2-Heptanone 123-86-4, Butyl acetate 502-44-3, .epsilon.-Caprolactone 763-69-9, Ethyl 3-ethoxypropionate 765-14-0 929-37-3 1320-67-8, Propylene glycol monomethyl ether 2182-55-0 4223-11-4 25085-99-8, Epikote 825 26256-87-1, 2,5,8,11-Tetraoxatridec-12-ene 50856-25-2 92268-17-2 160768-40-1 212555-24-3
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working electron beam or x-ray **resist compns**. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

L38 ANSWER 19 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:392162 HCAPLUS
DN 136:409022
TI Positive **resist composition**
IN Aoai, Toshiaki; Yasunami, Shoichiro; Mizutani, Kazuyoshi; Kanna, Shinichi
PA Fuji Photo Film Co., Ltd., Japan
SO U.S. Pat. Appl. Publ., 56 pp.
CODEN: USXXCO
DT Patent

LA English
IC ICM G03F007-004
NCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002061464	A1	20020523	US 2001-961281	20010925
	JP 2002333715	A2	20021122	JP 2001-202298	20010703
PRAI	JP 2000-292537	A	20000926		
	JP 2000-379284	A	20001213		
	JP 2001-62158	A	20010306		
	JP 2001-202298	A	20010703		

AB The present invention relates to a pos. **resist compn.** comprising: (A) a fluorine group-contg. resin having at least one fluorine atom on at least one of the main chain and the side chain of the polymer skeleton; and having a group capable of decompg. under the action of an acid to increase the soly. in an alkali developer; (B) a compd. capable of generating an acid upon irradn. with one of actinic ray and radiation; and (C) a **surfactant** contg. at least one of a silicon atom and a fluorine atom. The present invention provides a pos. **photoresist compn.** suitable for use in the microlithog. process in the prodn. of VLSI or high-capacity microchip, or in other photo-fabrication processes. The invention pos. **photoresist compn.** is capable of forming a highly definite pattern using a vacuum UV ray of < 160 nm.

ST **photoresist** fluorine contg resin **compn**
surfactant photolithog UV

IT **Surfactants**
(**fluorine** group-contg. pos. **resist compn.** contg.)

IT Positive **photoresists**
(fluorine group-contg. resin for pos. **resist compn** .)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant; fluorine** group-contg. pos. **resist compn.** contg.)

IT Photolithography
(vacuum UV; fluorine group-contg. resin for pos. **resist compn.** for)

IT **262617-13-0P 430436-66-1P 430436-67-2P**
430436-68-3P 430436-70-7P 430436-72-9P
430436-74-1P 430436-76-3P 430436-78-5P
430436-79-6P 430436-81-0P 430436-82-1P
430436-84-3P 430436-85-4P 430436-86-5P
430436-87-6P 430436-89-8P 430436-90-1P
430436-91-2P 430436-92-3P 430436-94-5P
430436-95-6P 430436-97-8P 430436-98-9P
430436-99-0P 430437-01-7P 430437-03-9P 430437-04-0P
430437-05-1P 430437-07-3P **430437-09-5P 430437-11-9P**
430437-12-0P 430437-13-1P 430437-14-2P
430437-15-3P 430437-17-5P 430437-18-6P
430437-19-7P 430437-21-1P 430437-22-2P
430437-24-4P 430437-26-6P 430437-27-7P
430437-29-9P 430437-30-2P 430437-32-4P

430437-33-5P 430437-34-6P 430437-35-7P
430437-36-8P 430437-37-9P 430437-38-0P
430437-39-1P 430437-40-4P **430437-42-6P**
430437-44-8P 430437-46-0P 431062-12-3P
431062-14-5P 431062-16-7P 431062-17-8P
431062-18-9P 431062-20-3P 431062-22-5P
431062-24-7P 431062-25-8P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine group-contg. resin for pos. **resist compn**
.)

IT 144317-44-2, Triphenylsulfonium nonaflate
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; fluorine group-contg. pos. **resist compn**. contg.)

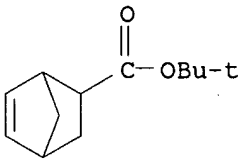
IT 9016-45-9, Polyoxyethylene nonylphenyl ether 137462-24-9, Megafac F176 216679-67-3, Megafac R08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; **fluorine** group-contg. pos. **resist compn**. contg.)

IT **262617-13-0P 430436-66-1P 430436-67-2P**
430436-68-3P 430436-70-7P 430436-72-9P
430436-74-1P 430436-76-3P 430436-78-5P
430436-79-6P 430436-81-0P 430436-82-1P
430436-84-3P 430436-85-4P 430436-86-5P
430436-87-6P 430436-89-8P 430436-90-1P
430436-91-2P 430436-92-3P 430436-94-5P
430436-95-6P 430436-97-8P 430436-98-9P
430436-99-0P 430437-09-5P 430437-11-9P
430437-12-0P 430437-13-1P 430437-14-2P
430437-15-3P 430437-17-5P 430437-18-6P
430437-19-7P 430437-21-1P 430437-22-2P
430437-24-4P 430437-26-6P 430437-27-7P
430437-29-9P 430437-30-2P 430437-32-4P
430437-33-5P 430437-34-6P 430437-36-8P
430437-37-9P 430437-38-0P 430437-39-1P
430437-42-6P 430437-44-8P 430437-46-0P
431062-12-3P 431062-14-5P 431062-16-7P
431062-17-8P 431062-18-9P 431062-20-3P
431062-22-5P 431062-24-7P 431062-25-8P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine group-contg. resin for pos. **resist compn**
.)

RN 262617-13-0 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

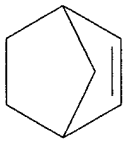
CM 1

CRN 154970-45-3
CMF C12 H18 O2



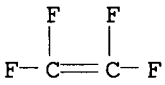
CM 2

CRN 498-66-8
CMF C7 H10



CM 3

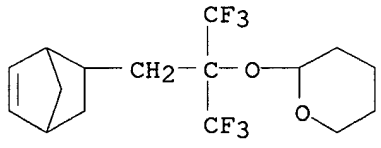
CRN 116-14-3
CMF C2 F4



RN 430436-66-1 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

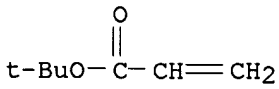
CRN 430436-65-0
CMF C16 H20 F6 O2



CM 2

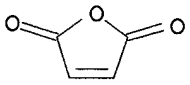
CRN 1663-39-4

CMF C7 H12 O2



CM 3

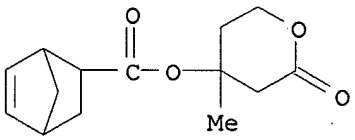
CRN 108-31-6
CMF C4 H2 O3



RN 430436-67-2 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrafluoroethene and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA INDEX NAME)

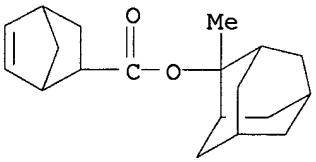
CM 1

CRN 357400-43-2
CMF C14 H18 O4



CM 2

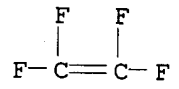
CRN 328087-85-0
CMF C19 H26 O2



CM 3

CRN 116-14-3

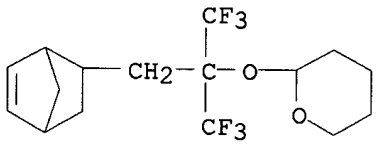
CMF C2 F4



RN 430436-68-3 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran and tetrafluoroethene (9CI) (CA INDEX NAME)

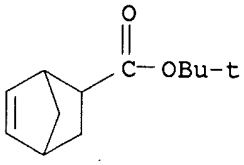
CM 1

CRN 430436-65-0
CMF C16 H20 F6 O2



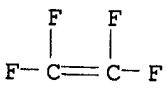
CM 2

CRN 154970-45-3
CMF C12 H18 O2



CM 3

CRN 116-14-3
CMF C2 F4

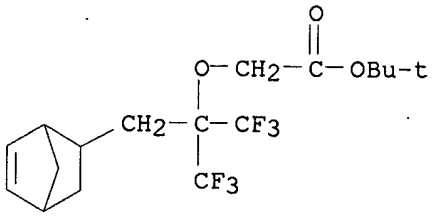


RN 430436-70-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate and

2,5-furandione (9CI) (CA INDEX NAME)

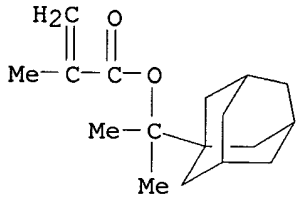
CM 1

CRN 430436-69-4
CMF C17 H22 F6 O3



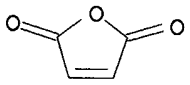
CM 2

CRN 279218-76-7
CMF C17 H26 O2



CM 3

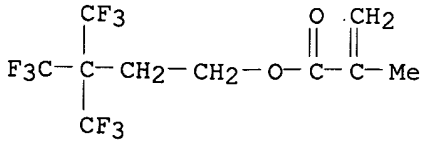
CRN 108-31-6
CMF C4 H2 O3



RN 430436-72-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate and 4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

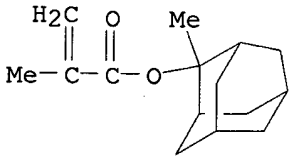
CM 1

CRN 430436-71-8
CMF C10 H9 F9 O2



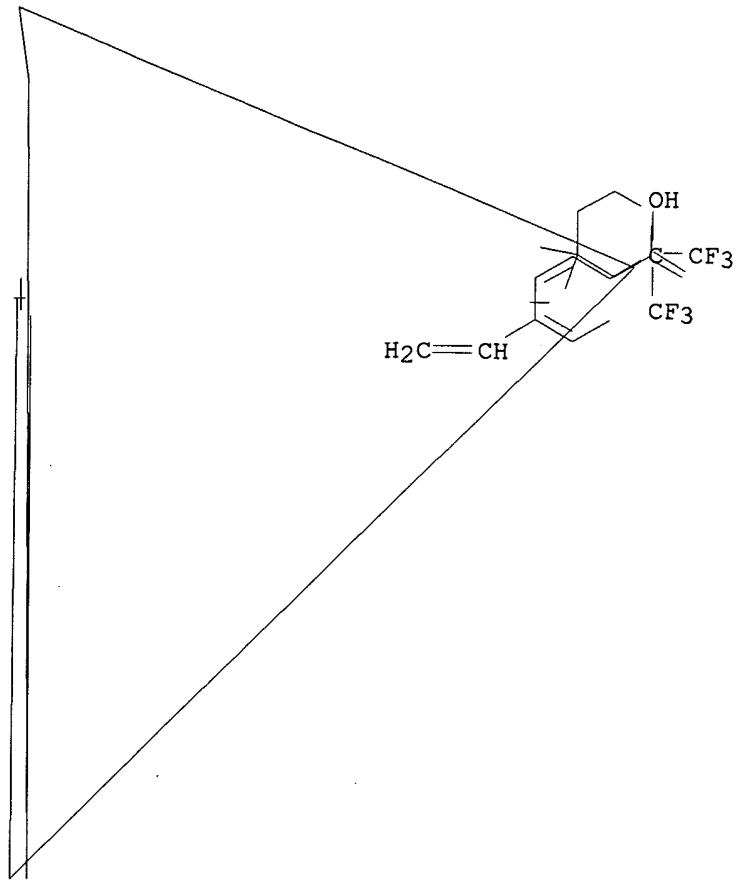
CM 2

CRN 177080-67-0
CMF C15 H22 O2



CM 3

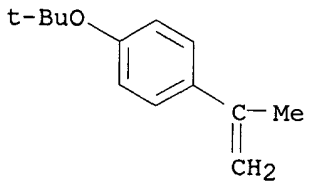
CRN 177080-66-9
CMF C10 H14 O4



RN 430437-19-7 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-(1-methylethenyl)benzene (9CI) (CA INDEX NAME)

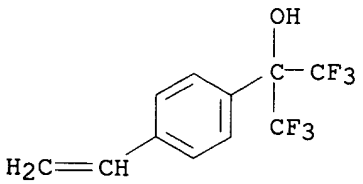
CM 1

CRN 105612-78-0
CMF C13 H18 O



CM 2

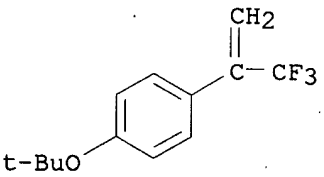
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-21-1 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-[1-(trifluoromethyl)ethenyl]benzene (9CI) (CA INDEX NAME)

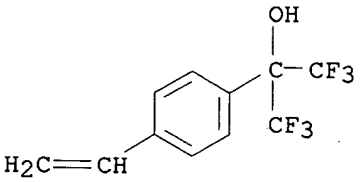
CM 1

CRN 430437-20-0
CMF C13 H15 F3 O



CM 2

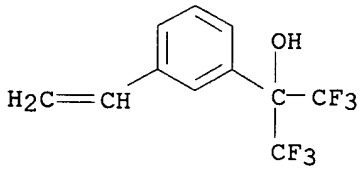
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-22-2 HCAPLUS
CN Benzenemethanol, 3-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

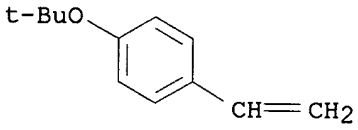
CM 1

CRN 122056-08-0
CMF C11 H8 F6 O



CM 2

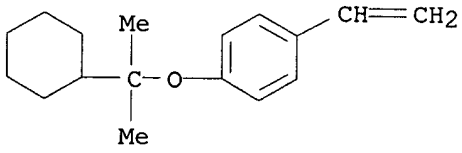
CRN 95418-58-9
CMF C12 H16 O



RN 430437-24-4 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.-methyl-.alpha.-(trifluoromethyl)-, polymer with 1-(1-cyclohexyl-1-methylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

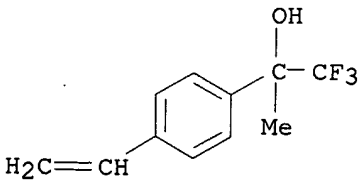
CM 1

CRN 430437-23-3
CMF C17 H24 O



CM 2

CRN 397287-76-2
CMF C11 H11 F3 O

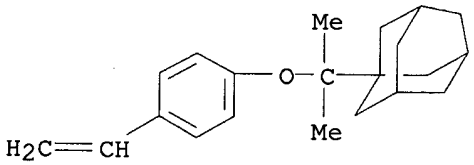


RN 430437-26-6 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.-methyl-.alpha.-(trifluoromethyl)-,

polymer with 1-[1-(4-ethenylphenoxy)-1-methylethyl]tricyclo[3.3.1.13,7]dec
ane (9CI) (CA INDEX NAME)

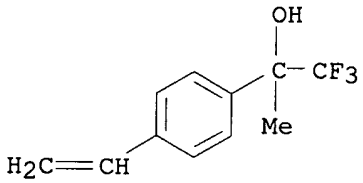
CM 1

CRN 430437-25-5
CMF C21 H28 O



CM 2

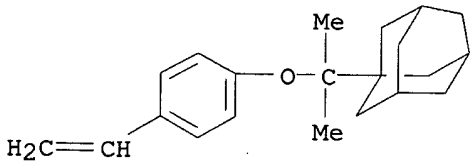
CRN 397287-76-2
CMF C11 H11 F3 O



RN 430437-27-7 HCAPLUS
CN Benzenemethanol, 4-(1-methylethenyl)-.alpha.,.alpha.-bis(trifluoromethyl)-
, polymer with 1-[1-(4-ethenylphenoxy)-1-methylethyl]tricyclo[3.3.1.13,7]d
ecane (9CI) (CA INDEX NAME)

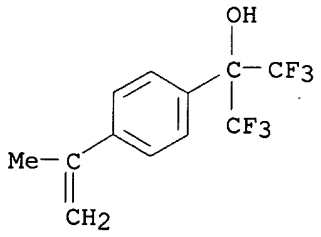
CM 1

CRN 430437-25-5
CMF C21 H28 O



CM 2

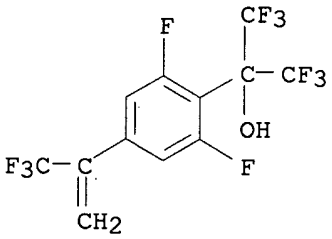
CRN 120721-71-3
CMF C12 H10 F6 O



RN 430437-29-9 HCAPLUS
CN Benzenemethanol, 2,6-difluoro-.alpha.,.alpha.-bis(trifluoromethyl)-4-[1-(trifluoromethyl)ethenyl]-, polymer with 1-[1-(4-ethenylphenoxy)-1-methylethyl]tricyclo[3.3.1.13,7]decane (9CI) (CA INDEX NAME)

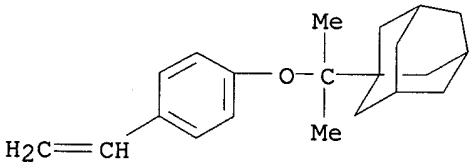
CM 1

CRN 430437-28-8
CMF C12 H5 F11 O



CM 2

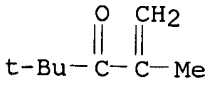
CRN 430437-25-5
CMF C21 H28 O



RN 430437-30-2 HCAPLUS
CN 1-Penten-3-one, 2,4,4-trimethyl-, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

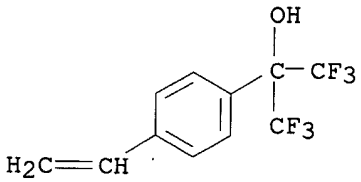
CM 1

CRN 7432-56-6
CMF C8 H14 O



CM 2

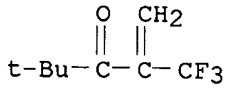
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-32-4 HCAPLUS
CN 1-Penten-3-one, 4,4-dimethyl-2-(trifluoromethyl)-, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

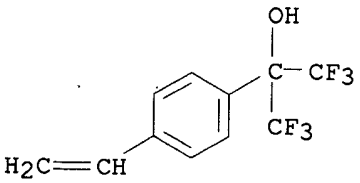
CM 1

CRN 430437-31-3
CMF C8 H11 F3 O



CM 2

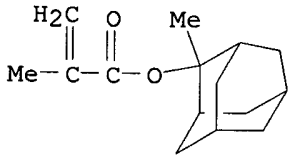
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-33-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

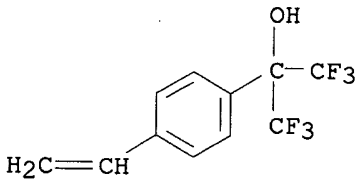
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

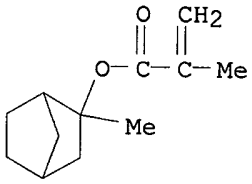
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-34-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methylbicyclo[2.2.1]hept-2-yl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

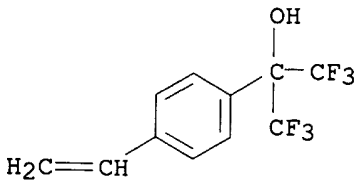
CM 1

CRN 344614-23-9
CMF C12 H18 O2



CM 2

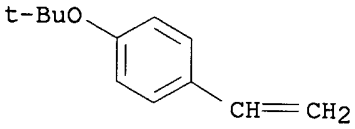
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-36-8 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and tetrafluoroethene (9CI) (CA INDEX NAME)

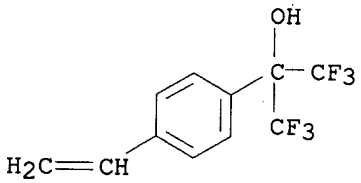
CM 1

CRN 95418-58-9
CMF C12 H16 O



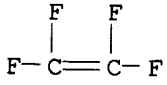
CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

CRN 116-14-3
CMF C2 F4

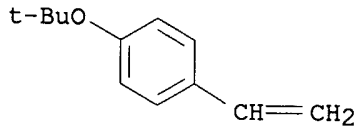


RN 430437-37-9 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-(1-methylethenyl)phenol

(9CI) (CA INDEX NAME)

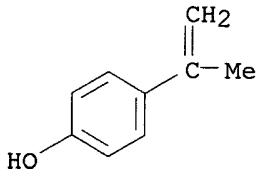
CM 1

CRN 95418-58-9
CMF C12 H16 O



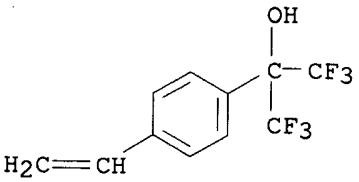
CM 2

CRN 4286-23-1
CMF C9 H10 O



CM 3

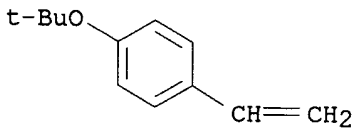
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-38-0 HCAPLUS
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and ethoxytrifluoroethene (9CI) (CA INDEX NAME)

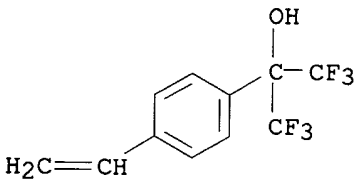
CM 1

CRN 95418-58-9
CMF C12 H16 O



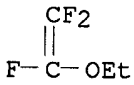
CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

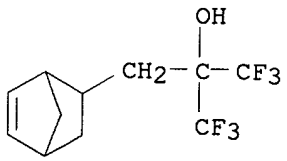
CRN 1763-27-5
CMF C4 H5 F3 O



RN 430437-39-1 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-ethanol, .alpha.,.alpha.-bis(trifluoromethyl)-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

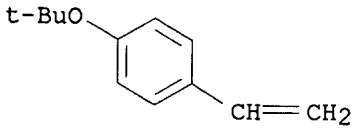
CM 1

CRN 196314-61-1
CMF C11 H12 F6 O



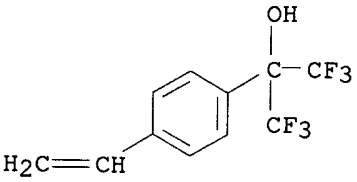
CM 2

CRN 95418-58-9
CMF C12 H16 O



CM 3

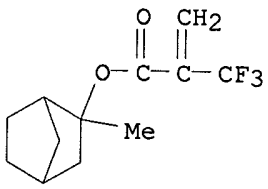
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-42-6 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methylbicyclo[2.2.1]hept-2-yl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

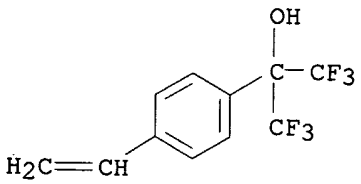
CM 1

CRN 430437-41-5
CMF C12 H15 F3 O2



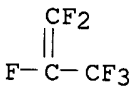
CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CM 3

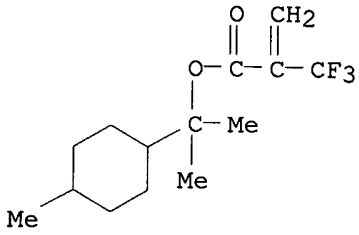
CRN 116-15-4
CMF C3 F6



RN 430437-44-8 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-methyl-1-(4-methylcyclohexyl)ethyl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and 3-(1-methylethenyl)phenol (9CI) (CA INDEX NAME)

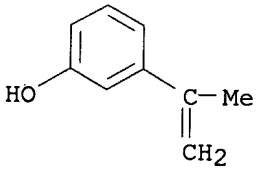
CM 1

CRN 430437-43-7
CMF C14 H21 F3 O2



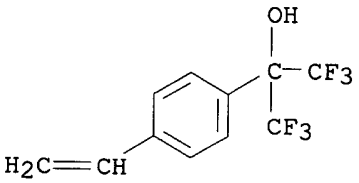
CM 2

CRN 51985-06-9
CMF C9 H10 O



CM 3

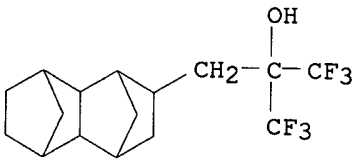
CRN 2386-82-5
CMF C11 H8 F6 O



RN 430437-46-0 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methylbicyclo[2.2.1]hept-2-yl ester, polymer with decahydro-.alpha.,.alpha.-bis(trifluoromethyl)-1,4:5,8-dimethanonaphthalene-2-ethanol and 2,6-difluoro-.alpha.,.alpha.-bis(trifluoromethyl)-4-[1-(trifluoromethyl)ethenyl]benzenemethanol (9CI) (CA INDEX NAME)

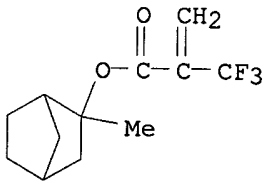
CM 1

CRN 430437-45-9
CMF C16 H20 F6 O



CM 2

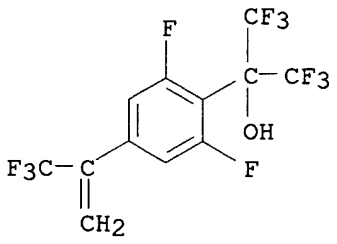
CRN 430437-41-5
CMF C12 H15 F3 O2



CM 3

CRN 430437-28-8

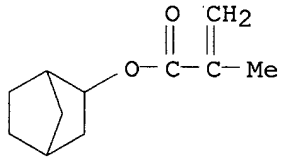
CMF C12 H5 F11 O

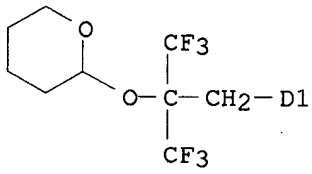


RN 431062-12-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

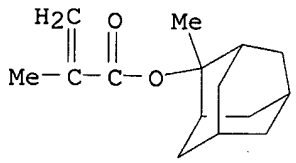
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





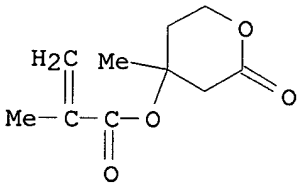
CM 2

CRN 177080-67-0
CMF C15 H22 O2



CM 3

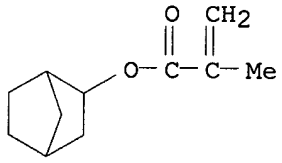
CRN 177080-66-9
CMF C10 H14 O4

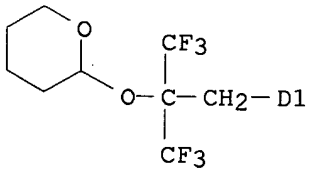


RN 431062-14-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with tetrahydro-2H-pyran-2-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

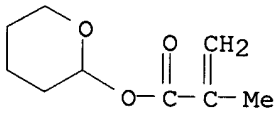
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





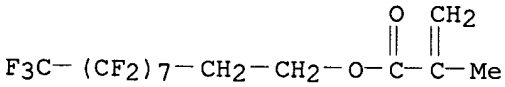
CM 2

CRN 52858-59-0
CMF C9 H14 O3



CM 3

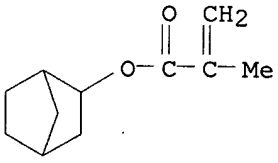
CRN 1996-88-9
CMF C14 H9 F17 O2

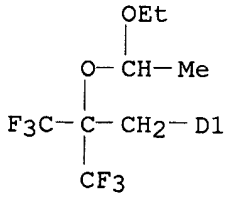


RN 431062-16-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 5(or 6)-[2-(1-ethoxyethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester polymer with 1-ethenyl-4-[1-(1-ethoxyethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

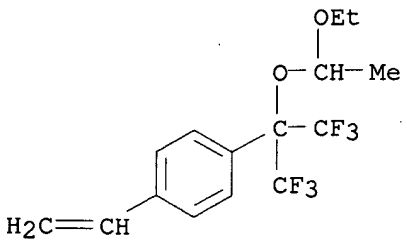
CRN 431062-15-6
CMF C19 H26 F6 O4
CCI IDS





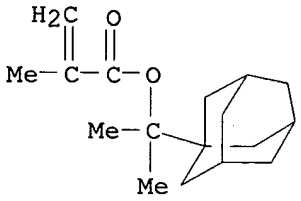
CM 2

CRN 430437-00-6
CMF C15 H16 F6 O2



CM 3

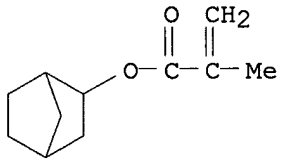
CRN 279218-76-7
CMF C17 H26 O2

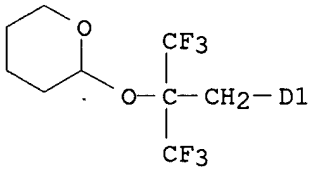


RN 431062-17-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate, tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

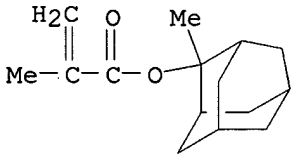
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





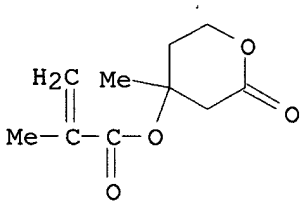
CM 2

CRN 177080-67-0
CMF C15 H22 O2



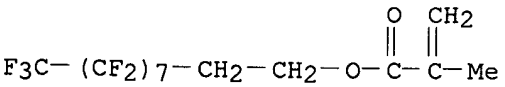
CM 3

CRN 177080-66-9
CMF C10 H14 O4



CM 4

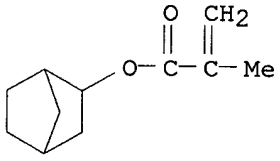
CRN 1996-88-9
CMF C14 H9 F17 O2

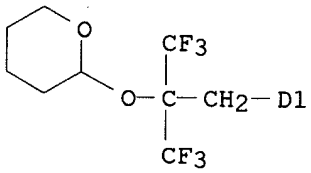


RN 431062-18-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, tetrahydro-5,5-dimethyl-2-oxo-3-furanyl ester, polymer with tetrahydro-2H-pyran-2-yl 2-methyl-2-propenoate, 4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

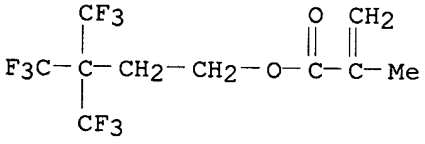
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





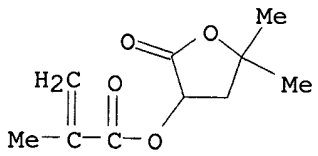
CM 2

CRN 430436-71-8
CMF C10 H9 F9 O2



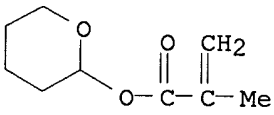
CM 3

CRN 280552-09-2
CMF C10 H14 O4



CM 4

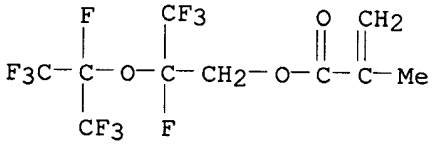
CRN 52858-59-0
CMF C9 H14 O3



RN 431062-20-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with 2,3,3,3-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethoxy]propyl 2-methyl-2-propenoate, tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

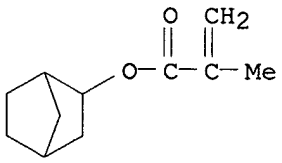
CM 1

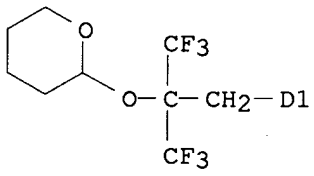
CRN 431062-19-0
CMF C10 H7 F11 O3



CM 2

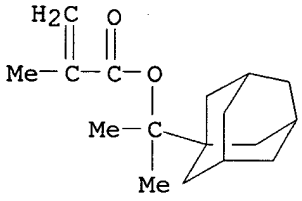
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





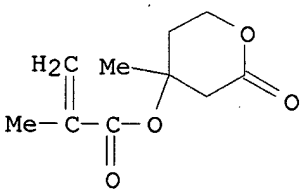
CM 3

CRN 279218-76-7
CMF C17 H26 O2



CM 4

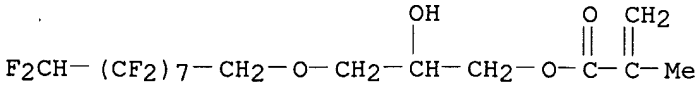
CRN 177080-66-9
CMF C10 H14 O4



RN 431062-22-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluorononyl)oxy]-2-hydroxypropyl ester, polymer with 1-methyl-1-(tetrahydro-5-oxo-3-furanyl)ethyl 2-methyl-2-propenoate, 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-[(tetrahydro-2H-pyran-2-yl)oxy]-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

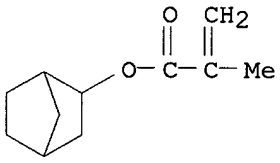
CM 1

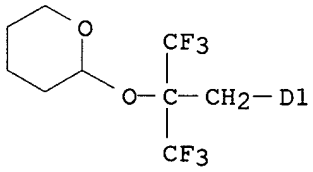
CRN 431062-21-4
CMF C16 H14 F16 O4



CM 2

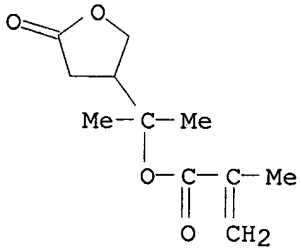
CRN 431062-13-4
CMF C20 H26 F6 O4
CCI IDS





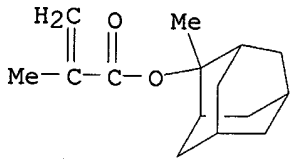
CM 3

CRN 280566-59-8
CMF C11 H16 O4



CM 4

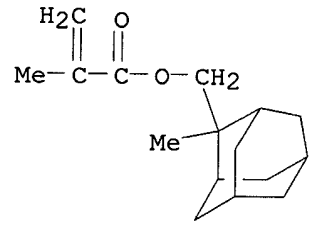
CRN 177080-67-0
CMF C15 H22 O2



RN 431062-24-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (2-methyltricyclo[3.3.1.13,7]dec-2-yl)methyl ester, polymer with 4-ethenyl-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

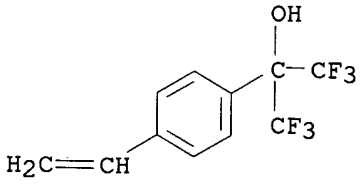
CM 1

CRN 431062-23-6
CMF C16 H24 O2



CM 2

CRN 2386-82-5
CMF C11 H8 F6 O

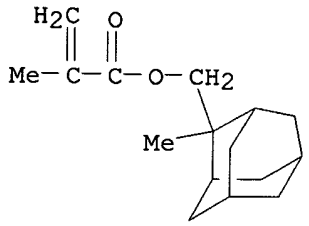


RN 431062-25-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (2-methyltricyclo[3.3.1.13,7]dec-2-yl)methyl ester, polymer with 1,1,2,3,3,3-hexafluoro-1-propene and 4-(1-methylethenyl)-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

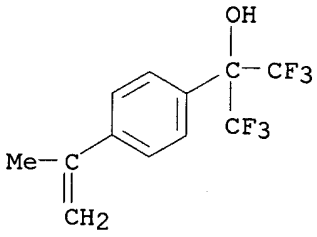
CRN 431062-23-6

CMF C16 H24 O2



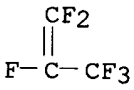
CM 2

CRN 120721-71-3
CMF C12 H10 F6 O



CM 3

CRN 116-15-4
CMF C3 F6



L38 ANSWER 20 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:378692 HCAPLUS
DN 136:409015
TI Aqueous surface-treating **compositions** for resists and pattern formation using them
IN Hatakeyama, Jun; Watanabe, Atsushi; Harada, Yuji; Kawai, Yoshio; Sasako, Masaru; Endo, Masataka; Kishimura, Shinji; Otani, Michitaka; Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda, Kazuhiko
PA Shin-Etsu Chemical Industry Co., Ltd., Japan; Matsushita Electric Industrial Co., Ltd.; Central Glass Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-38

ICS G03F007-004; G03F007-075
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002148821	A2	20020522	JP 2000-346448	20001114
PRAI JP 2000-346448		20001114		

OS MARPAT 136:409015
AB The **compns**. for prewet treatment of F- or Si-contg. polymer resist materials with high water repellency before development show surface tension .ltoreq.25 dyn/cm at 25.degree. and pH .ltoreq.7 at 25.degree.. Patterns are formed by applying F- or Si-contg. polymer resist materials on substrates, exposing the resulting resist films, postexposure baking, treating with the **compns**., and developing. The surface-treated resist materials show good wettability for developers and give defect-free patterns.
ST fluoropolymer resist surface treatment developer wettability; silicon polymer resist surface treatment developer wettability; fluoro **surfactant** prewetting agent photoresist wettability
IT **Photoresists**
(aq. prewetting **compns**. with specified surface tension for **resists** giving defect-free patterns)
IT Fluoropolymers, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(aq. prewetting **compns**. with specified surface tension for **resists** giving defect-free patterns)
IT **Surfactants**
(**fluorosurfactants**; aq. prewetting **compns**. with specified surface tension for **resists** giving defect-free patterns)
IT Polyoxyalkylenes, uses
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(polyoxymethylene-, perfluoro; aq. prewetting **compns**. with specified surface tension for **resists** giving defect-free patterns)
IT 141-43-5, Ethanolamine, uses **307-78-8 335-76-2**
25038-02-2 51604-67-2 68259-12-1 88177-20-2
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(aq. prewetting **compns**. with specified surface tension for **resists** giving defect-free patterns)
IT **417704-57-5**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(aq. prewetting **compns**. with specified surface tension for **resists** giving defect-free patterns)
IT **307-78-8 335-76-2**
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(aq. prewetting **compns**. with specified surface tension for **resists** giving defect-free patterns)
RN 307-78-8 HCAPLUS
CN Decanedioic acid, hexadecafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-(CF_2)_8-CO_2H$

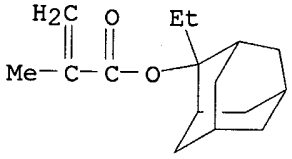
RN 335-76-2 HCAPLUS
CN Decanoic acid, nonadecafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$F_3C-(CF_2)_8-CO_2H$

IT **417704-57-5**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(aq. prewetting **compns**. with specified surface tension for **resists** giving defect-free patterns)
RN 417704-57-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 2,2,2-trifluoroethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

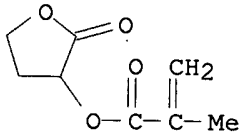
CM 1

CRN 209982-56-9
CMF C16 H24 O2



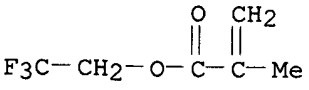
CM 2

CRN 195000-66-9
CMF C8 H10 O4



CM 3

CRN 352-87-4
CMF C6 H7 F3 O2



L38 ANSWER 21 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:364226 HCAPLUS
DN 136:393267
TI Positive-working **resist compositions** with high sensitivity and resolution
IN Fujimori, Toru; Tan, Shiro; Nakao, Hajime
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 43 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08K005-095; C08K005-16; C08L057-00; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002139839	A2	20020517	JP 2000-332955	20001031
PRAI	JP 2000-332955		20001031		

OS MARPAT 136:393267
AB The **compns.** contain **photoacid generators** (A), polymers (B) having alicyclic hydrocarbon structures in the main or side chains and good soly. in alkali developing agents by acid-induced decompn., and compds. (C) shown as RXC:OOH (R = F-contg. hydrocarbyl; X = F-free divalent linking group). The **compns.**, useful for microphotofabrication using ArF excimer laser in semiconductor device fabrication, give **resist** patterns with good pattern profiles and reduced standing wave effect.
ST pos **photoresist** standing wave effect prevention; **resist photoacid generator photolithog** semiconductor fabrication; far UV **photoresist** amine fluorohexanoic acid
IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(KP 341, **surfactant**; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)
IT Positive **photoresists**
(far UV; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)
IT **Surfactants**
(pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)
IT Amines, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)
IT 177080-68-1P, 2-Methyl-2-adamantane methacrylate-mevalonic lactone methacrylate copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acid-decomposable polymer; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT 195000-67-0 195154-83-7 216308-45-1, Methacrylic acid-2-methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 288303-55-9 297156-40-2 304441-22-3, Diethyleneglycol monomethyl ether methacrylate-2-methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 307976-27-8 324770-96-9 357413-69-5 357413-70-8 357413-71-9
RL: TEM (Technical or engineered material use); USES (Uses)
(acid-decomposable polymer; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT 122752-67-4, tert-Butyl cholate
RL: TEM (Technical or engineered material use); USES (Uses)
(dissoln. inhibitor; pos.-working **photoresist compns** . with high sensitivity and reduced standing wave effect)

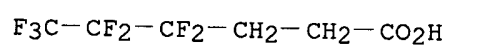
IT 66003-78-9, Triphenylsulfonium triflate 144089-15-6, Triphenylsulfonium perfluorooctanesulfonate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate 194999-85-4, Bis(4-tert-butylphenyl)iodonium perfluorobutanesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT **356-02-5** 484-47-9, 2,4,5-Triphenylimidazole **653-21-4** **2516-99-6** 3001-72-7, DBN 6674-22-2, DBU **85068-33-3** **181772-16-7**
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

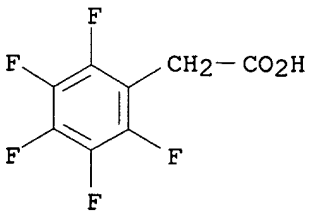
IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT **356-02-5 653-21-4 2516-99-6 85068-33-3 181772-16-7**
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

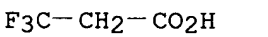
RN 356-02-5 HCAPLUS
CN Hexanoic acid, 4,4,5,5,6,6,6-heptafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



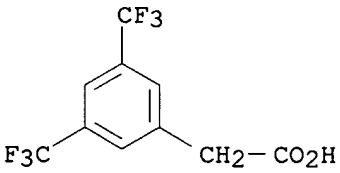
RN 653-21-4 HCAPLUS
CN Benzeneacetic acid, 2,3,4,5,6-pentafluoro- (9CI) (CA INDEX NAME)



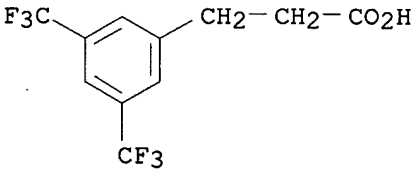
RN 2516-99-6 HCAPLUS
CN Propanoic acid, 3,3,3-trifluoro- (9CI) (CA INDEX NAME)



RN 85068-33-3 HCAPLUS
CN Benzeneacetic acid, 3,5-bis(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 181772-16-7 HCAPLUS
CN Benzenepropanoic acid, 3,5-bis(trifluoromethyl)- (9CI) (CA INDEX NAME)



L38 ANSWER 22 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:364225 HCAPLUS
DN 136:393266
TI Positive-working **resist compositions** with high sensitivity and resolution
IN Fujimori, Toru; Tan, Shiro; Nakao, Hajime
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 45 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08K005-10; C08K005-16; C08L101-02; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and

Other Reprographic Processes)
Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002139837	A2	20020517	JP 2000-332733	20001031
PRAI	JP 2000-332733		20001031		

OS MARPAT 136:393266

AB The **compns.** contain **photoacid generators** (A), polymers (B) having alicyclic hydrocarbon structures in the main or side chains and good soly. in alkali developing agents by acid-induced decompn., and compds. (C) shown as RWC:OOB (R = F-contg. hydrocarbyl; W = F-free divalent org. group; B = acid-decomposable group). The **compns.**, useful for microphotofabrication using ArF excimer laser in semiconductor device fabrication, give **resist** patterns with good pattern profiles and reduced standing wave effect.

ST pos **photoresist** standing wave effect prevention; **resist photoacid generator photolithog** semiconductor fabrication; far UV **photoresist** alkali development

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(KP 341, **surfactant**; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT Positive **photoresists**
(far UV; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT **Surfactants**
(pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT 177080-68-1P, 2-Methyl-2-adamantane methacrylate-mevalonic lactone methacrylate copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid-decomposable polymer; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT 195000-67-0 195154-83-7 216308-45-1, Methacrylic acid-2-methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 288303-55-9 297156-40-2 304441-22-3, Diethyleneglycol monomethyl ether methacrylate-2-methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 307976-27-8 324770-96-9 357413-69-5 357413-70-8 357413-71-9
RL: TEM (Technical or engineered material use); USES (Uses)
(acid-decomposable polymer; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT 122752-67-4, tert-Butyl cholate
RL: TEM (Technical or engineered material use); USES (Uses)
(dissoln. inhibitor; pos.-working **photoresist compns** . with high sensitivity and reduced standing wave effect)

IT 66003-78-9, Triphenylsulfonium triflate 144089-15-6, Triphenylsulfonium perfluorooctanesulfonate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate 194999-85-4, Bis(4-tert-butylphenyl)iodonium perfluorobutanesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

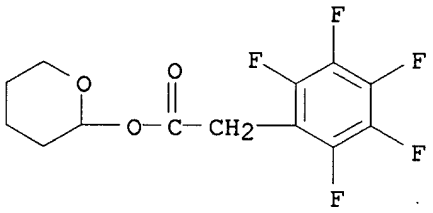
IT **410537-72-3 410537-74-5 417709-53-6 417709-54-7 417709-55-8 417709-56-9**

425660-61-3 425660-63-5 425660-67-9
425660-70-4 425660-74-8 425660-78-2
425660-81-7
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

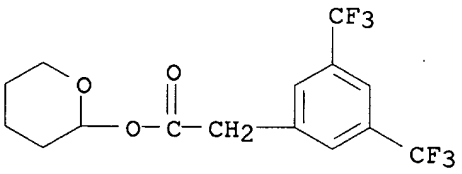
IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant;** pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

IT **410537-72-3 410537-74-5 417709-53-6**
417709-54-7 417709-55-8 417709-56-9
425660-61-3 425660-63-5 425660-67-9
425660-70-4 425660-74-8 425660-78-2
425660-81-7
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compns.** with high sensitivity and reduced standing wave effect)

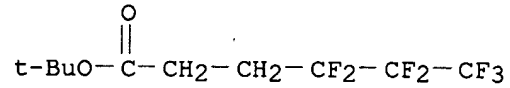
RN 410537-72-3 HCAPLUS
CN Benzeneacetic acid, 2,3,4,5,6-pentafluoro-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)



RN 410537-74-5 HCAPLUS
CN Benzeneacetic acid, 3,5-bis(trifluoromethyl)-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)

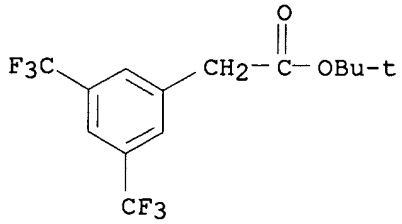


RN 417709-53-6 HCAPLUS
CN Hexanoic acid, 4,4,5,5,6,6,6-heptafluoro-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

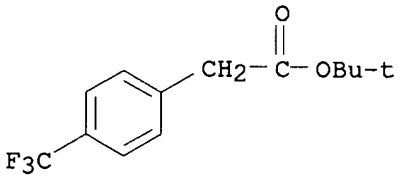


RN 417709-54-7 HCAPLUS
CN Benzeneacetic acid, 3,5-bis(trifluoromethyl)-, 1,1-dimethylethyl ester

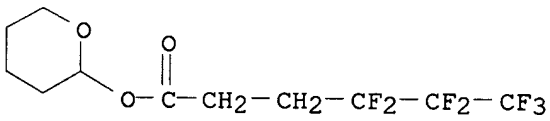
(9CI) (CA INDEX NAME)



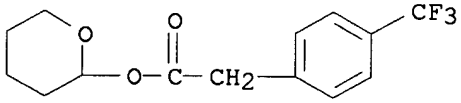
RN 417709-55-8 HCAPLUS
CN Benzeneacetic acid, 4-(trifluoromethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



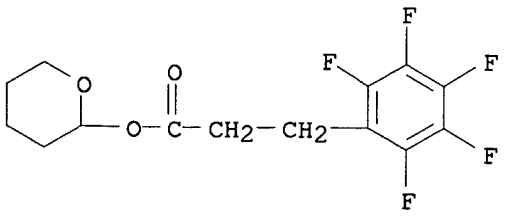
RN 417709-56-9 HCAPLUS
CN Hexanoic acid, 4,4,5,5,6,6,6-heptafluoro-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)



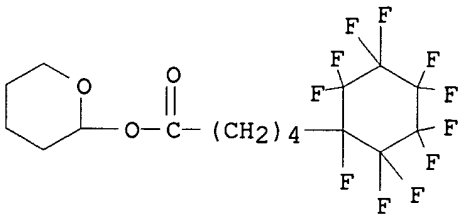
RN 425660-61-3 HCAPLUS
CN Benzeneacetic acid, 4-(trifluoromethyl)-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)



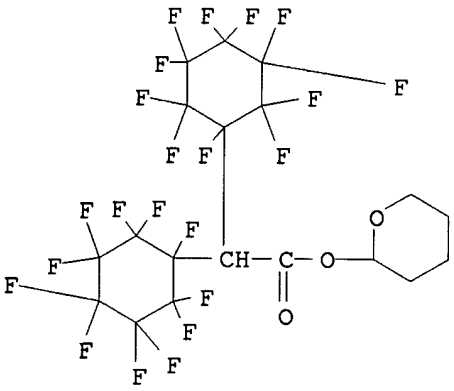
RN 425660-63-5 HCAPLUS
CN Benzenepropanoic acid, 2,3,4,5,6-pentafluoro-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)



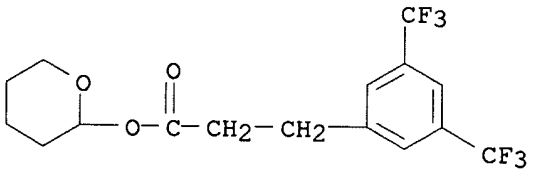
RN 425660-67-9 HCAPLUS
CN Cyclohexanepentanoic acid, 1,2,2,3,3,4,4,5,5,6,6-undecafluoro-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)



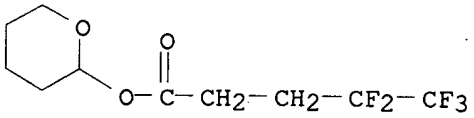
RN 425660-70-4 HCAPLUS
CN Cyclohexaneacetic acid, 1,2,2,3,3,4,4,5,5,6,6-undecafluoro-.alpha.-(undecafluorocyclohexyl)-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)



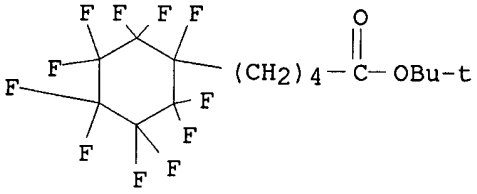
RN 425660-74-8 HCAPLUS
CN Benzenepropanoic acid, 3,5-bis(trifluoromethyl)-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)



RN 425660-78-2 HCAPLUS
CN Pentanoic acid, 4,4,5,5,5-pentafluoro-, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)



RN 425660-81-7 HCAPLUS
CN Cyclohexanepentanoic acid, 1,2,2,3,3,4,4,5,5,6,6-undecafluoro-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



L38 ANSWER 23 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:349275 HCAPLUS
DN 136:377476
TI Chemically amplified positive-working **photoresist** **compositions** for excimer laser development with high sensitivity and resolution
IN Fujimori, Toru; Tan, Shiro; Nakao, Hajime
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08F220-10; C08K005-00; C08L101-02; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002131910	A2	20020509	JP 2000-325915	20001025
PRAI	JP 2000-325915		20001025		

AB The **compns.** comprise (A) **photoacid generators** , (B) resins having alicyclic hydrocarbon structures, which are decompd.

by acids to increase their alkali-soly., and (C) RWCO2B (R = alkyl, alicyclic ring-contg. group; W = divalent org. group; B = acid-decomposable group). The **photoresists** are useful for micro-photofabrication by far UV radiation at .ltoreq.250 nm wavelength.

ST pos **photoresist** excimer laser sensitivity microphotofabrication; chem amplification **photoresist** ArF laser resoln

IT Positive **photoresists**
(chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

IT **Surfactants**
(**fluorosurfactants**; chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

IT 16537-07-8P 177080-68-1P 181224-88-4P 195000-67-0P 195154-83-7P 216308-45-1P 288303-55-9P 297156-40-2P 304441-22-3P 307976-24-5P 324770-96-9P 357413-69-5P 357413-70-8P 357413-71-9P 410540-02-2P 410540-10-2P 410540-12-4P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

IT 110-87-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

IT 122752-67-4, tert-Butyl cholate
RL: CAT (Catalyst use); USES (Uses)
(dissolving inhibitor; chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

IT 66003-78-9, Triphenylsulfonium triflate 144089-15-6, Triphenylsulfonium perfluorooctanesulfonate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate 194999-85-4, Bis(4-tert-butylphenyl)iodonium perfluorobutanesulfonate
RL: CAT (Catalyst use); USES (Uses)
(**photoacid generator**; chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

IT 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene
RL: TEM (Technical or engineered material use); USES (Uses)
(**resist** contg.; chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

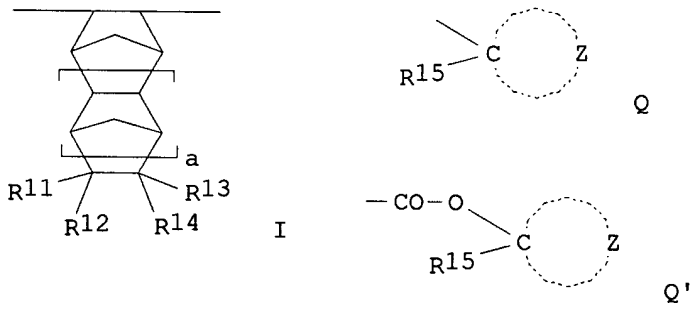
IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; chem. amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resoln.)

L38 ANSWER 24 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:347848 HCAPLUS
DN 136:361828
TI Positive-working **photoresist compositions** containing norbornene-acrylate copolymers
IN Sato, Kenichiro; Nakao, Hajime
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 80 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08F232-08; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002131917	A2	20020509	JP 2001-169802	20010605
PRAI	JP 2000-174037	A	20000609		
	JP 2000-186431	A	20000621		
	JP 2000-206812	A	20000707		
	JP 2000-206890	A	20000707		
	JP 2000-211414	A	20000712		
	JP 2000-215441	A	20000717		
	JP 2000-248658	A	20000818		

OS MARPAT 136:361828
GI



AB The **compns.**, which show wide defocus latitude, reduced line edge roughness, and high resoln., contain (A) resin which increases its soly. in alk. developers upon reaction of acids and contain (a) a repeating unit I [R11-R14 = H, (un)substituted alkyl; a = 0, 1] and (b) CH2CR1(ACO2W) (R1 = H, Me; A = direct bond, alkylene, cycloalkylene, O, ether group, thioether group, O, ester group; W = Q, CR16R17R18, CHR20OR19, CR23R25CR21:CR22R24, R26R29CHR27COR28, Q1; R15 = Me, Et, Pr, CHMe2, Bu, CH2CMe2, CHMeEt; Z = at. group required to form an alicyclic ring; R16-R20 = C1-4 linear or branched alkyl, alicyclyl; .gtoreq.1 of R16-R18, R19 or R20 = alicyclyl; R21-R25 = H, C1-4 linear or branched alkyl, alicyclyl; .gtoreq.1 R21-R25 = alicyclyl; R23 or R25 = C1-4 linear or branched alkyl, alicyclyl; R26-R29 = C1-4 linear or branched alkyl, alicyclyl; .gtoreq.1 of R26-R29 = alicyclyl), (B) compds. which generate acids upon irradn. of actinic ray or radiation, and optionally (C1) R[X(CR51CR52)qCO2R1]n (X = O, S, NR53, direct bond, R53 = H, alkyl; CO2R1 = acid-decomposable group; R = n-valent bridged hydrocarbon ring, satd. cyclic hydrocarbon ring, naphthalene ring; n = 1-4; q = 0-10), (C2) naphthalene derivs. II (R60 = alkyl, halo; OR61 = acid-decomposable group; m = 0-4; p = 1-4), or (C3) steroid compds. which contain .gtoreq.2 substituents having .gtoreq.1 carboxyl group protected with acid-labile group. The acid generators may

be imide sulfonate compds. or diazodisulfonic acids (Markush structures are given) and optionally sulfonium salts. (C1)-(C3) work as dissoln. inhibitors and the **compns.** give high-resoln. contact hole and trench patterns in fabrication of semiconductor devices.

ST pos **photoresist** norbornene acrylate copolymer **photoacid generator**; dissoln inhibitor butyl deoxycholate glutaryl chloride copolymer

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341; pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

IT **Surfactants**
(**fluorine**-contg. or silicones; pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

IT Positive **photoresists**
(pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

IT Ketones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(solvents; pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

IT 24556-20-5 115298-62-9 115311-03-0 130782-09-1 172615-57-5
207512-00-3 244634-41-1 343223-56-3 421555-75-1 421555-76-2
421555-77-3 421555-78-4 421555-79-5 421555-80-8 421555-81-9
421555-82-0 421555-83-1 421555-84-2
RL: TEM (Technical or engineered material use); USES (Uses)
(dissoln. inhibitor; pos.-working **photoresist compns** . contg. norbornene-acrylate copolymers)

IT 321994-64-3P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(oligomeric, dissoln. inhibitor; pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

IT 14159-45-6 28343-24-0 66003-78-9 81416-37-7 116808-67-4
138529-81-4 138529-84-7 138529-87-0 144089-15-6 144317-44-2
145612-66-4 153698-46-5 153698-67-0 157089-26-4 171417-91-7
177786-96-8 177786-98-0 179419-32-0 211517-08-7 241806-75-7
252937-66-9 258341-98-9 258341-99-0 258342-00-6 258872-05-8
260061-58-3 270563-93-4 284474-28-8 301525-08-6 307976-40-5
312386-77-9 324771-13-3 338445-26-4 338445-30-0 341979-02-0
343629-55-0 350249-87-5 391232-40-9 421555-68-2 421555-69-3
421555-70-6 421555-71-7 421555-72-8 421555-73-9 421555-74-0
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

IT 249562-07-0P 249562-17-2P, Maleic anhydride-2-methyl-2-adamantyl acrylate-norbornene copolymer 260448-02-0P, tert-Butyl acrylate-maleic anhydride-norbornene copolymer 351867-96-4P 421555-57-9P
421555-59-1P 421555-60-4P 421555-61-5P 421555-62-6P 421555-63-7P
421555-64-8P 421555-65-9P 421555-66-0P 421555-67-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3 6674-22-2, DBU
137462-24-9, Megafac F176 216679-67-3, Megafac R08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

IT 96-48-0, .gamma.-Butyrolactone 96-49-1, Ethylene carbonate 97-64-3, Ethyl lactate 108-32-7, Propylene carbonate 110-43-0, 2-Heptanone 123-86-4, Butyl acetate 763-69-9 1320-67-8, Propylene glycol monomethyl ether 84540-57-8, Propylene glycol monomethyl ether acetate 98516-33-7, Propylene glycol monomethyl ether propionate
RL: TEM (Technical or engineered material use); USES (Uses)
(solvent; pos.-working **photoresist compns.** contg. norbornene-acrylate copolymers)

L38 ANSWER 25 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:345226 HCAPLUS
DN 136:361820
TI Chemically amplified positive photosensitive polymer **compositions** for **resists** with high resolution
IN Kawabe, Yasumasa
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08K005-053; C08K005-16; C08K005-29; C08L033-04; C08L045-00; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002131913	A2	20020509	JP 2000-327357	20001026
PRAI JP 2000-327357		20001026		

OS MARPAT 136:361820
AB The **compns.**, useful for semiconductor device fabrication, printed circuit board manuf., etc., comprise (A) polymers having alicyclic hydrocarbon blocks, which become alkali-sol. by acid decompn., (B) radiation-sensitive acid generators, (C) XCR1OHCR2OHY or X(C:NOH)2Y (R1, R2 = H, C1-4-alkyl, Ph; R3, R4 = halo, C1-4-alkyl, trifluoromethyl; X = C6H5-lR3l; Y = C6H5-mR4m; l, m = 0-3), and (D) fluoro and/or silicone **surfactants.** The **resist compns.** are sensitive to ArF excimer laser beams.
ST pos **photoresist** diphenylethylene glycol excimer laser; chem amplification ArF laser **resist** resoln
IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341, **surfactant**; excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)
IT Positive **photoresists**
(excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)
IT **Surfactants**
(**fluorosurfactants**; excimer laser-sensitive chem. amplified

pos. **photoresists** with high resoln.)

IT 100-97-0, Hexamethylenetetramine, uses 3001-72-7, 1.5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1.8-Diazabicyclo[5.4.0]-7-undecene
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(acid scavenger; excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)

IT 122752-67-4P, tert-Butyl cholate
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid-sensitive, increasing alkali-soly. of polymers with; excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)

IT 195000-67-0P 249562-07-0P, Maleic anhydride-2-methyl-2-adamantyl methacrylate-2-norbornene copolymer 258879-87-7P, 3-Hydroxy-1-adamantyl methacrylate-.alpha.-methacryloxy-.gamma.-butyrolactone-2-methyl-2-adamantyl methacrylate copolymer 260448-02-0P, tert-Butyl acrylate-maleic anhydride-norbornene copolymer 301525-10-0P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)

IT 464-72-2 1636-34-6 **3870-47-1** 23873-81-6
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)

IT 81-25-4, Cholic acid 3999-70-0, Potassium butoxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)

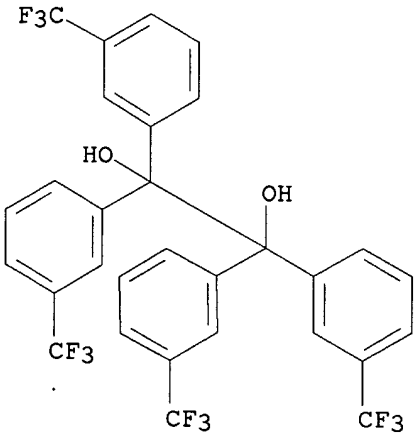
IT 66003-78-9, Triphenylsulfonium triflate 144317-44-2, Triphenylsulfoniumnonafluorobutane sulfonate
RL: CAT (Catalyst use); USES (Uses)
(**photoacid generator**; excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)

IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)

IT **3870-47-1**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(excimer laser-sensitive chem. amplified pos. **photoresists** with high resoln.)

RN 3870-47-1 HCAPLUS

CN 1,2-Ethanediol, 1,1,2,2-tetrakis[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



L38 ANSWER 26 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:345222 HCAPLUS
DN 136:377471
TI Positively working radiation-sensitive **resist composition** with improved coatability
IN Kanna, Shinichi; Kodama, Kunihiko
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 63 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-004; C08K005-00; C08L101-12; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002131898	A2	20020509	JP 2000-327424	20001026
PRAI JP 2000-327424		20001026		

OS MARPAT 136:377471
AB The **compn.** contains (A) polymers increasing soly. in alkali developers by decompn. with acids, (B) acid generator by irradn. of actinic ray, (C) org. basic compds., (D) solvents, and (E) 50-5000 ppm **surfactants**, preferably having **fluoroalkyl** group in the mol., to get discolored by irradn. of actinic ray. The **compn.** prevents generation of standing wave.
ST pos radiation sensitive resit coatability standing wave prevention; **fluoroalkyl** discolorable **surfactant** radiation sensitive **resist**
IT Positive **photoresists**
Surfactants
(pos.-working radiation-sensitive **resist compn.** contg. **fluoroalkyl**-substituted discolorable **surfactant** with improved coatability)
IT 13891-29-7, Triphenylsulfonium p-toluenesulfonate 138529-81-4, Bis(cyclohexylsulfonyl)diazomethane 197447-16-8 422508-79-0
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)

(**photoacid generator**; pos.-working radiation-sensitive **resist compn.** contg. **fluoroalkyl**-substituted discolorable **surfactant** with improved coatability)

IT 109-53-5DP, Isobutyl vinyl ether, reaction products with Bu acrylate-hydroxystyrene copolymer 926-02-3DP, tert-Butyl vinyl ether, reaction products with hydroxystyrene polymer and cyclohexaneethanol 4442-79-9DP, Cyclohexaneethanol, reaction products with hydroxystyrene polymer and Bu vinyl ether 24979-70-2DP, VP 8000, reaction products with Bu vinyl ether and cyclohexaneethanol 121273-79-8P 129674-22-2P, p-(tert-Butoxycarbonyloxy)styrene-p-hydroxystyrene copolymer 158593-28-3P, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer 159296-87-4P, tert-Butyl acrylate-p-vinylphenol copolymer 199432-82-1P, p-Hydroxystyrene-p-(1-isobutoxyethoxy)styrene copolymer 200808-68-0P, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer 288620-15-5P, p-(1-Benzyloxyethoxy)styrene-p-hydroxystyrene copolymer 325143-38-2P 365971-61-5P 365971-64-8P 365971-70-6P 365971-71-7P 365971-72-8P 376600-58-7P 387382-49-2P 422508-57-4P 422508-61-0P 422508-62-1P 422508-64-3P 422508-65-4P 422508-66-5P 422508-67-6P 422508-71-2P 422508-72-3P 422508-74-5P 422508-76-7P 422508-77-8P 422508-78-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working radiation-sensitive **resist compn.** contg. **fluoroalkyl**-substituted discolorable **surfactant** with improved coatability)

IT 524-38-9, N-Hydroxyphthalimide 3744-08-9, Triphenylsulfonium iodide 141784-10-3, 2-Nitro-6-trifluoromethylbenzyl alcohol 365971-60-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(pos.-working radiation-sensitive **resist compn.** contg. **fluoroalkyl**-substituted discolorable **surfactant** with improved coatability)

IT 102-82-9, Tributylamine 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 312386-77-9 422508-59-6 422508-63-2 422508-69-8
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working radiation-sensitive **resist compn.** contg. **fluoroalkyl**-substituted discolorable **surfactant** with improved coatability)

L38 ANSWER 27 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:265038 HCAPLUS
DN 136:311310
TI Low-temperature-curable acrylic coating compositions with good storage stability and adhesion to various substrates
IN Kageishi, Kazuji; Osanai, Yoshitaka; Ando, Yumi
PA Toray Industries, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D133-14
ICS C08F265-00; C09D005-02; C09D143-00; C09D151-06; C09D163-00; C09D175-04; C09D183-04
CC 42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002105388	A2	20020410	JP 2000-295833	20000928

PRAI JP 2000-295833 20000928

AB Title compns. comprise (A) acrylic polymers obtained from hydroxy-contg. acrylic polymers with no. av. mol. wt. 500-80,000 derived from OH-contg. unsatd. monomers and epoxy group-contg. acrylic polymers with no. av. mol. wt. 500-80,000 derived from epoxy-contg. unsatd. monomers, (B) curing agents, and nonionic surfactants, wherein the polymers (A) have epoxy-contg. unsatd. monomer content <5000 ppm. Thus, 100 parts polymer prepd. from 20/80 Me methacrylate-2-hydroxyethyl methacrylate copolymer and Bu acrylate-Bu methacrylate-Cyclomer A 200-Me methacrylate copolymer was mixed with Surflon KH 40 (ethoxylated perfluoroalkyl alc. surfactant) 5000 ppm, Alumichelate AW [aluminum tri(acetyl acetonate)] 3 and acetylacetone 6 parts, coated on substrates and cured, showing good adhesion to various substrates (such as glass, ABS, steel and Al plates), curability and storage stability at 23-40.degree..

ST acrylic coating low temp curability; epoxy hydroxy contg acrylic coating adhesion; nonionic surfactant acrylic coating storage stability

IT Polysiloxanes, uses
Polyurethanes, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-epoxy; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polysiloxane-; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyurethane-; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Aminoplasts
Polysiloxanes, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Perfluoro compounds
RL: MOA (Modifier or additive use); USES (Uses)
(alkynyl alcs., ethoxylated, surfactant; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Alcohols, uses
RL: MOA (Modifier or additive use); USES (Uses)
(alkynyl, perfluoro, ethoxylated, surfactant; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Cement
(asbestos; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Reinforced plastics
RL: MSC (Miscellaneous)
(carbon fiber-reinforced; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Surfactants
(fluorosurfactants; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)

IT Coating materials
(low-temp.-curable; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT Surfactants
(nonionic; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT Coating materials
(storage-stable; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT Glass, miscellaneous
Polycarbonates, miscellaneous
RL: MSC (Miscellaneous)
(substrate; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT Aluminum alloy, base
Magnesium alloy, base
RL: MSC (Miscellaneous)
(substrate; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT 26355-01-1P, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer 38437-12-6P, Glycidyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer 99038-07-0P 124348-85-2P 146241-49-8P 409364-99-4P 409365-00-0P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT 253874-55-4P, Butyl acrylate-butyl methacrylate-glycidyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate-SH 6040 copolymer 318988-59-9P, Butyl acrylate-butyl methacrylate-Cyclomer A 200-2-hydroxyethyl methacrylate-methyl methacrylate copolymer 409364-96-1P 409364-97-2P 409364-98-3P 409365-01-1P 410076-37-8P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT 9003-07-0, Polypropylene 9003-56-9, ABS 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(substrate; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT 9016-45-9, Newcol 564 **251907-30-9**, Surflon KH 40 410076-01-6, Megafac F 471
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
IT **251907-30-9**, Surflon KH 40
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant; low-temp.-curable acrylic coating compns. with good storage stability and adhesion to various substrates)
RN 251907-30-9 HCAPLUS
CN Surflon KH 40 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L38 ANSWER 28 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:265037 HCAPLUS
DN 136:311309

TI Storage-stable resin compositions for coatings with good resistance to soiling and weather
IN Kageishi, Ichiji; Osanai, Yoshitaka; Ando, Yumi
PA Toray Industries, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D133-00
ICS C09D005-00; C09D151-06; C09D161-28; C09D163-00; C09D175-00
CC 42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002105384	A2	20020410	JP 2000-295832	20000928
PRAI	JP 2000-295832		20000928		

AB The compns. contain (A) acrylic resins having no.-av. mol. wt. (Mn) 500-80,000 and obtained by copolymn. of alkoxysilyl group-contg. unsatd. compds. (I) and acrylic resins having Mn 500-80,000 and obtained by copolymn. of epoxy group-contg. unsatd. compds. (II), (B) curing agents and (C) nonionic surfactants where the content of II in A is at <5000 ppm. Thus, mixing 20 parts a Me methacrylate-SZ 6030 (.gamma.-methacryloxypropyltrimethoxysilane) (80:20) copolymer (Mn 8000, acid no. 13.7 mg-KOH/g; solids content 50%) with 80 parts a Bu acrylate-Bu methacrylate-Cyclomer A 200 (epoxycyclohexylmethyl acrylate)-Me methacrylate 20:20:20:40 copolymer (Mn 18,000; epoxy group-contg. equiv. wt. 910; solids content 50%), adding Surflon KH 40 (surfactant; 5000 ppm) to the resulting mixt., and mixing with 3 phr Aluminum Chelate AW (tris(acetoacetato)aluminum) and 6 phr Acac gave a coating compn. with II content 10 ppm.

ST alkoxysilyl acrylic polymer storage stable coating epoxy acrylic resin; soiling weather resistance coating alkoxysilyl epoxy acrylic resin compn

IT Epoxy resins, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(acrylic; storage-stable resin compns. for coatings with good resistance to soiling and weather)

IT Coating materials
(antisoiling; storage-stable resin compns. for coatings with good resistance to soiling and weather)

IT Aminoplasts
RL: MOA (Modifier or additive use); USES (Uses)
(curing agent; storage-stable resin compns. for coatings with good resistance to soiling and weather)

IT Surfactants
(nonionic; storage-stable resin compns. for coatings with good resistance to soiling and weather)

IT Coating materials
(weather-resistant; storage-stable resin compns. for coatings with good resistance to soiling and weather)

IT 2530-83-8, SH-6040 9003-08-1, Cymel 285 28574-90-5, HMDI trimer 127464-53-3, Sumidur N 3500
RL: MOA (Modifier or additive use); USES (Uses)
(curing agent; storage-stable resin compns. for coatings with good resistance to soiling and weather)

IT 123-54-6, Acetylacetone, uses 19022-77-6, Aluminum Chelate AW
RL: CAT (Catalyst use); USES (Uses)
(curing catalyst; storage-stable resin compns. for coatings with good

resistance to soiling and weather)

IT 9016-45-9, Newcol 564 **251907-30-9**, Surflon KH 40 410076-01-6, Megafac F 471
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(nonionic surfactant; storage-stable resin compns. for coatings with good resistance to soiling and weather)

IT 146241-49-8P, Butyl acrylate-butyl methacrylate-Cyclomer A 200-methyl methacrylate copolymer 146876-44-0P, Methacrylic acid;.gamma.-methacryloxypropyltrimethoxysilane copolymer 318988-59-9P, Butyl acrylate;butyl methacrylate;Cyclomer A 200;2-hydroxyethyl methacrylate;methyl methacrylate copolymer 409362-21-6P, Butyl acrylate;butyl methacrylate;Cyclomer A 200;methacrylic acid;2-hydroxyethyl methacrylate;.gamma.-methacryloxypropyltrimethoxysilane;methyl methacrylate;perfluorooctyl methacrylate graft copolymer 409362-23-8P, Butyl acrylate;butyl methacrylate;glycidyl methacrylate;2-hydroxyethyl methacrylate;methacrylic acid;.gamma.-methacryloxypropyltrimethoxysilane;methyl methacrylate graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(storage-stable resin compns. for coatings with good resistance to soiling and weather)

IT **251907-30-9**, Surflon KH 40
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(nonionic surfactant; storage-stable resin compns. for coatings with good resistance to soiling and weather)

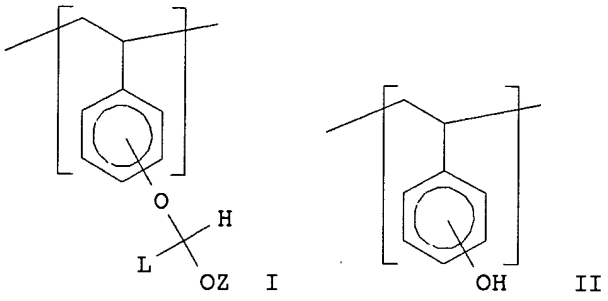
RN 251907-30-9 HCAPLUS
CN Surflon KH 40 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L38 ANSWER 29 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:176284 HCAPLUS
DN 136:239101
TI Positive-working **photoresist compositions** containing carboxy-terminated fluorine-containing polyethers
IN Kawabe, Yasumasa; Kanna, Shinichi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 38 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08K005-095; C08K005-16; C08L025-18; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002072482	A2	20020312	JP 2000-265558	20000901
PRAI	JP 2000-265558		20000901		

GI



AB The **compn.** contains (A) **photoacid generators**, (B) polymers insol. or hardly sol. in alkali but become alkali-sol. by treatment with acids, and (C) carboxylic acid derivs. having mol. wt. .ltoreq.1000 and having partial structure (CR22)nO(CR12)mCO2H (R1 = H, F, CF3; R2 = H, F, CF3, OR3; R3 = C1-4 alkyl, fluoroalkyl; m, n = integer of 1-3; R1 and/or R2 contain F). Preferably, component B contains structural repeating units I and II (L = H, (un)substituted linear, branched, or cyclic alkyl, (un)substituted aralkyl; Z = (un)substituted linear, branched, or cyclic alkyl, (un)substituted aralkyl; Z + L may form 5- or 6-membered ring). The **compns.** may also contain N-contg. basic compds. and fluoro- and/or Si-contg. **surfactants.** Formation of defects on development is prevented. The **compns.** are suitable in fabrication of semiconductor devices.

ST pos **photoresist** carboxy terminated polyether **compn;** semiconductor fabrication pos **photoresist** alk developing

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341, **surfactant;** addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

IT Positive **photoresists**
(addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

IT **Surfactants**
(**fluorosurfactants;** addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

IT 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

IT 24979-78-0DP, p-Acetoxystyrene homopolymer, hydrolyzed 347384-02-5DP, tert-Butylstyrene-p-tert-butoxystyrene copolymer, hydrolyzed
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

IT 24979-70-2, Poly(p-hydroxystyrene)
RL: TEM (Technical or engineered material use); USES (Uses)
(addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

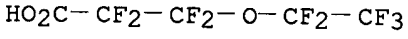
IT 66003-78-9 138529-81-4 197447-16-8
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

IT **377-76-4 10186-64-8 13252-13-6 13252-14-7 267901-01-9**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(prevention of development defects with; addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

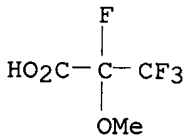
IT 11114-17-3, **Fluorad** FC 430 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

IT **377-76-4 10186-64-8 13252-13-6 13252-14-7 267901-01-9**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(prevention of development defects with; addn. of carboxy-terminated fluorine-contg. polyethers to pos.-working **photoresist compns.** for prevention of defects in development)

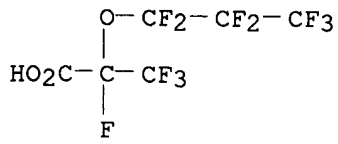
RN 377-76-4 HCAPLUS
CN Propanoic acid, 2,2,3,3-tetrafluoro-3-(pentafluoroethoxy)- (9CI) (CA INDEX NAME)



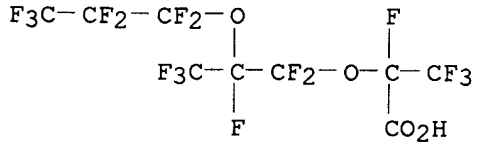
RN 10186-64-8 HCAPLUS
CN Propanoic acid, 2,3,3,3-tetrafluoro-2-methoxy- (9CI) (CA INDEX NAME)



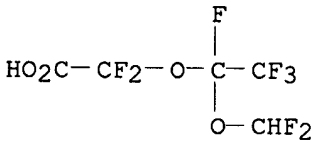
RN 13252-13-6 HCAPLUS
CN Propanoic acid, 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)- (9CI) (CA INDEX NAME)



RN 13252-14-7 HCAPLUS
CN Propanoic acid, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]- (9CI) (CA INDEX NAME)



RN 267901-01-9 HCAPLUS
CN Acetic acid, [1-(difluoromethoxy)-1,2,2,2-tetrafluoroethoxy]difluoro- (9CI) (CA INDEX NAME)



L38 ANSWER 30 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:176283 HCAPLUS
DN 136:239100
TI Positively working photoresist **composition** for suppression of development defect
IN Kawabe, Yasumasa
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08K005-09; C08K005-16; C08L101-00; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002072481	A2	20020312	JP 2000-265557	20000901
PRAI JP 2000-265557		20000901		

AB The **compn.** comprises (A) polymer with alicyclic hydrocarbon structure which becomes alkali sol. by acid decompn., (B) acid generator sensitive to actinic ray or radiation, (C) C4-20 aliph. (di)carboxylic

acid including .gtoreq.4 F atoms per mol. and having mol. wt. .ltoreq.1000, (D) N-contg. basic compd., and (E) F- and/or Si-contg. **surfactant**. The **compn**. has high sensitivity, and defect-free resist patterns with high size accuracy, resoln., and low line edge roughness can be formed.

ST pos working photoresist development defect suppression; aliph fluorocarboxylic acid alicyclic hydrocarbon polymer pos photoresist

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(KP 341, **surfactant**; pos. working photoresist **compn**. for formation of resist pattern without development defect)

IT Positive **photoresists**
(pos. working photoresist **compn**. for formation of resist pattern without development defect)

IT 66003-78-9, Triphenylsulfonium triflate
RL: TEM (Technical or engineered material use); USES (Uses)
(acid generator; pos. working photoresist **compn**. for formation of resist pattern without development defect)

IT 169223-75-0P, 1-Adamantyl methacrylate-tert-butyl acrylate copolymer 195143-37-4P, Acrylic acid-tert-butyl acrylate-maleic anhydride-norbornene copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. working photoresist **compn**. for formation of resist pattern without development defect)

IT **336-08-3 375-95-1 2706-90-3** 3001-72-7, 1,5-Diazabicyclo [4.3.0]-5-nonene 6674-22-2, 1.8-Diazabicyclo [5.4.0]-7-undecene **13252-13-6 403615-96-3**
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. working **photoresist compn**. for formation of **resist** pattern without development defect)

IT 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos. working photoresist **compn**. for formation of resist pattern without development defect)

IT **336-08-3 375-95-1 2706-90-3 13252-13-6 403615-96-3**
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. working **photoresist compn**. for formation of **resist** pattern without development defect)

RN 336-08-3 HCAPLUS
CN Hexanedioic acid, octafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-(CF_2)_4-CO_2H$

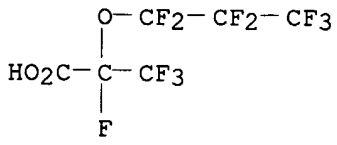
RN 375-95-1 HCAPLUS
CN Nonanoic acid, heptadecafluoro- (8CI, 9CI) (CA INDEX NAME)

$HO_2C-(CF_2)_7-CF_3$

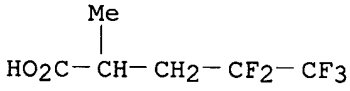
RN 2706-90-3 HCAPLUS
CN Pentanoic acid, nonafluoro- (9CI) (CA INDEX NAME)

$HO_2C-(CF_2)_3-CF_3$

RN 13252-13-6 HCAPLUS
CN Propanoic acid, 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)- (9CI) (CA INDEX NAME)



RN 403615-96-3 HCAPLUS
CN Pentanoic acid, 4,4,5,5,5-pentafluoro-2-methyl- (9CI) (CA INDEX NAME)



L38 ANSWER 31 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:135882 HCAPLUS
DN 136:191695
TI Positive-working **photoresist compositions** free of developing defects and having high resolution and linearity
IN Fujimori, Toru; Tan, Shiro
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08L101-06; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002055453	A2	20020220	JP 2000-241457	20000809
PRAI	JP 2000-241457		20000809		

AB The **compns.** contain (a) an acid-dissocg. alk.-developing polymer obtained by reaction of a polymer having phenolic OH group with alkyl vinyl ether and alc. in presence of an acidic catalyst followed by further reaction with another alkyl vinyl ether, (b) a **photoacid generator**, and (c) a solvent. Optionally, the **compns.** may also contain Si-type and/or **F**-type **surfactants** and/or org. basic compds.
ST pos **photoresist** acetalized phenol polymer; resoln linearity pos **photoresist compn**
IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(Troysol S 366, **surfactant**; pos. **photoresist**

compns. phenol polymers acetalized with alkyl vinyl ethers)

IT **Surfactants**
(**fluorosurfactants**; pos. **photoresist compns**
. phenol polymers acetalized with alkyl vinyl ethers)

IT Acetalization
Positive **photoresists**
(pos. **photoresist compns**. phenol polymers
acetalized with alkyl vinyl ethers)

IT **Surfactants**
(silicon-contg.; pos. **photoresist compns**. phenol
polymers acetalized with alkyl vinyl ethers)

IT 98-00-0, Furfuryl alcohol 100-51-6, Benzyl alcohol, uses 4442-79-9, Cyclohexaneethanol
RL: NUU (Other use, unclassified); USES (Uses)
(acetalization of phenol polymers in presence of; pos.
photoresist compns. phenol polymers acetalized with
alkyl vinyl ethers)

IT 13891-29-7 138529-81-4 197447-16-8
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; pos. **photoresist**
compns. phenol polymers acetalized with alkyl vinyl ethers)

IT 109-53-5DP, Isobutyl vinyl ether, reaction products with phenol polymers
109-92-2DP, Ethyl vinyl ether, reaction products with phenol polymers
926-02-3DP, tert-Butyl vinyl ether, reaction products with phenol polymers
24979-78-0DP, p-Acetoxystyrene homopolymer, hydrolyzed, acetalized with tert-Bu vinyl ether and Et vinyl ether 159296-87-4DP, tert-Butyl acrylate-p-hydroxystyrene copolymer, acetalized with tert-Bu vinyl ether and Et vinyl ether 325790-99-6DP, p-tert-Butoxystyrene-p-tert-butyl styrene copolymer, hydrolyzed, acetalized with tert-Bu vinyl ether and Et vinyl ether
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **photoresist compns**. phenol polymers
acetalized with alkyl vinyl ethers)

IT 1116-76-3, Trioctylamine 1122-58-3 3001-72-7
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoresist compns**. phenol polymers
acetalized with alkyl vinyl ethers)

IT 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos. **photoresist compns**.
phenol polymers acetalized with alkyl vinyl ethers)

L38 ANSWER 32 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:119605 HCAPLUS
DN 136:191687
TI Positive-working **photoresist composition** containing polymer with acetal structure
IN Fujimori, Toru; Tan, Shiro
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 30 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08F212-14; C08K005-00; C08K005-16; C08K013-08; C08L025-18; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and

Other Reprographic Processes)
Section cross-reference(s): 38

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002049156	A2	20020215	JP 2000-234733	20000802
PRAI JP 2000-234733		20000802		

AB The **compn.** contains (a) a polymer having repeating units polyhydroxystyrene derivs. whose soly. to alk. developer increases by the action of an acid, (b) a compd. generating an acid by light or radiation, and (c) a solvent. The **compn.** shows high resoln., linearity, dry etching **resistance**, and gives patterns without defect.

ST pos **resist** acid decomposable polymer acetal structure

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(Troysol S 366; pos. **photoresist compn.** contg. acid-decomposable polymer with acetal structure)

IT **Surfactants**
(**fluorosurfactants**; pos. **photoresist compn** . contg. acid-decomposable polymer with acetal structure)

IT Positive **photoresists**
(pos. **photoresist compn.** contg. acid-decomposable polymer with acetal structure)

IT 13891-29-7 138529-81-4 197447-16-8
RL: TEM (Technical or engineered material use); USES (Uses)
(acid **generator**; pos. **photoresist compn.** contg. acid-decomposable polymer with acetal structure)

IT 1122-58-3 3001-72-7
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(basic compd.; pos. **photoresist compn.** contg. acid-decomposable polymer with acetal structure)

IT 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**fluorosurfactant**; pos. **photoresist compn** . contg. acid-decomposable polymer with acetal structure)

IT 109-53-5DP, Isobutyl vinyl ether, ethers with hydroxystyrene polymer 109-92-2DP, Ethyl vinyl ether, ethers with hydroxystyrene polymer 935-04-6DP, Benzyl vinyl ether, ethers with hydroxystyrene polymer 2182-55-0DP, Cyclohexyl vinyl ether, ethers with hydroxystyrene polymer 18370-86-0DP, ethers with hydroxystyrene polymer 24979-70-2DP, Poly(p-hydroxystyrene), reaction products with vinyl ethers 103983-46-6DP, ethers with hydroxystyrene polymer 159296-87-4DP, tert-Butyl acrylate-p-hydroxystyrene copolymer, reaction products with vinyl ethers 212555-24-3DP, 4-Cyclohexylphenoxyethyl vinyl ether, ethers with hydroxystyrene polymer 309758-97-2DP, ethers with hydroxystyrene polymer 312694-56-7DP, ethers with hydroxystyrene polymer 376359-32-9DP, p-(tert-Butyl)styrene-p-hydroxystyrene copolymer, reaction products with vinyl ethers 399044-25-8DP, ethers with hydroxystyrene polymer 399044-26-9DP, ethers with hydroxystyrene polymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **photoresist compn.** contg. acid-decomposable polymer with acetal structure)

L38 ANSWER 33 OF 77 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:119600 HCAPLUS
DN 136:191683
TI Negatively working electron-beam or x-ray **resist composition**
IN Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 35 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-038
ICS C08F002-44; C08F291-00; G03F007-004; G03F007-027; G03F007-029; G03F007-033; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002049150	A2	20020215	JP 2000-235915	20000803
PRAI JP 2000-235915		20000803		

AB The **compn.** contains (A) acid and/or radical generators by irradn. of electron beam or x-ray, (B) water-insol. and alk.-sol. polymers, (C) crosslinking agents, (D) compds. having .gtoreq.1 acid- and/or radically polymerizable unsatd. linkage in a mol., and (E) F-contg. and/or silicone surfactants. The **compn.** shows high sensitivity and gives high-resoln. **resist** images with good developability to be useful for fine patterning in manuf. of semiconductor devices.

ST neg electron beam x ray **resist** surfactant; semiconductor device fine patterning electron beam **resist; fluorine** silicone **surfactant resist** electron beam x ray

IT **Surfactants**
(**F**- or silicone-contg.; neg. working electron-beam or x-ray **resist compn.**)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(KP 341, **surfactant**; neg. working electron-beam or x-ray **resist compn.**)

IT X-ray **resists**
(neg. working electron-beam or x-ray **resist compn.**)

IT Electron beam **resists**
(neg.-working; neg. working electron-beam or x-ray **resist compn.**)

IT 270564-02-8P, Tetramethylammonium pentafluorobenzenesulfonate
RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(acid generator from; neg. working electron-beam or x-ray **resist compn.**)

IT 3744-08-9P, Triphenylsulfonium iodide 258342-09-5P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(acid generator from; neg. working electron-beam or x-ray **resist compn.**)

IT 71-43-2, Benzene, reactions 75-59-2, Tetramethylammonium hydroxide 832-53-1, Pentafluorobenzenesulfonyl chloride 945-51-7, Diphenyl sulfoxide 2049-95-8, tert-Amylbenzene 7664-93-9, Sulfuric acid, reactions 7758-05-6, Potassium iodate 12027-06-4, Ammonium iodide
RL: RCT (Reactant); RACT (Reactant or reagent)

(acid generator from; neg. working electron-beam or x-ray **resist compn.**)

IT 270563-93-4 270563-96-7 279244-39-2 279244-43-8 349647-26-3
RL: CAT (Catalyst use); USES (Uses)
(acid generator; neg. working electron-beam or x-ray **resist compn.**)

IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate 258341-98-9P
RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(acid generator; neg. working electron-beam or x-ray **resist compn.**)

IT 162846-57-3P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(crosslinking agent from; neg. working electron-beam or x-ray **resist compn.**)

IT 50-00-0, Formaldehyde, reactions 110726-28-8, Trisp PA
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agent from; neg. working electron-beam or x-ray **resist compn.**)

IT 161679-94-3P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinking agent; neg. working electron-beam or x-ray **resist compn.**)

IT 3089-11-0 32449-09-5 185502-14-1 185502-15-2 197087-74-4
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent; neg. working electron-beam or x-ray **resist compn.**)

IT 171429-59-7P 173786-80-6DP, hydrolyzed 349647-07-0P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(neg. working electron-beam or x-ray **resist compn.**)

IT 15625-89-5, Trimethylolpropane triacrylate 17831-71-9, Tetraethylene glycol diacrylate 24979-73-5 29570-58-9, Dipentaerythritol hexaacrylate 110123-10-9 185405-14-5 349647-01-4 349647-03-6 349647-04-7 349647-05-8 349647-06-9 399034-03-8
RL: TEM (Technical or engineered material use); USES (Uses)
(neg. working electron-beam or x-ray **resist compn.**)

IT 66003-78-9
RL: CAT (Catalyst use); USES (Uses)
(**photoacid generator**; neg. working electron-beam or x-ray **resist compn.**)

IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; neg. working electron-beam or x-ray **resist compn.**)

L38 ANSWER 34 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:26263 HCAPLUS
DN 136:93493
TI Radiation-sensitive **photoresist composition** containing **fluorosurfactant**
IN Nanba, Katsuhiko
PA Sumitomo Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-004; C08K005-16; C08K005-41; C08K005-43; C08L083-08; C08L101-02; G03F007-038; G03F007-039; G03F007-075; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002006483	A2	20020109	JP 2000-184169	20000620
	GB 2363856	A1	20020109	GB 2001-14825	20010618
	US 2002012874	A1	20020131	US 2001-882049	20010618
	DE 10129296	A1	20020307	DE 2001-10129296	20010618
PRAI	JP 2000-184169	A	20000620		

AB The title **compn.** contains binder materials, and an acid-generator, wherein a fluorosurfactant is added to the **compn**. The **compn.**, which contains the fluorosurfactant, generates little faulty image during the development.
ST radiation sensitive photoresist **compn** fluoro surfactant
IT Surfactants
(**fluorosurfactants**; radiation-sensitive **photoresist** **compn.** contg. fluoro surfactant)
IT **Photoresists**
(radiation-sensitive photoresist **compn.** contg. fluoro surfactant)
IT 159012-32-5, Silanediol, methyl(4,4,4-trifluorobutyl)-, homopolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(surfactant in Radiation-sensitive photoresist **compn.**)

L38 ANSWER 35 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:919127 HCAPLUS
DN 136:45688
TI Release agent for etching-resistant resin **composition** and/or photoresist
IN Shiroyama, Masami
PA Mitsuwaka Junyaku Kenkyusho K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-42
ICS C09D009-00; C23F001-00
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001350277	A2	20011221	JP 2000-168597	20000606
PRAI	JP 2000-168597		20000606		

AB The release agent comprises (a) .gtoreq.1 polyvalent alc. or a deriv. thereof 1-10%, (b) .gtoreq.1 surfactant 0.001-0.1% selected from anionic surfactants, nonionic surfactants, and fluoro-surfactants, (c) caustic alkali 5-40% , and (d) water in balance. The release agent free of a chelating agent makes discharge and a water-rinsing step easier.
ST release agent photoresist
IT Surfactants
(anionic; release agent for etching-resistant resin **compn.**

and/or photoresist)
IT Surfactants
(**fluorosurfactants**; release agent for etching-**resistant** resin **compn**. and/or **photoresist**)
IT Surfactants
(nonionic; release agent for etching-resistant resin **compn**. and/or photoresist)
IT Parting materials
Photoresists
(release agent for etching-resistant resin **compn**. and/or photoresist)
IT 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(release agent for etching-resistant resin **compn**. and/or photoresist)
IT 56-81-5, Glycerin, uses 57-55-6, Propylene glycol, uses 111-76-2, Ethylene glycol monobutyl ether 112-35-6, Triethylene glycol monomethyl ether 1310-73-2, Caustic Soda, uses 2795-39-3, FC 95 25155-30-0, Neogen SC
RL: TEM (Technical or engineered material use); USES (Uses)
(release agent for etching-resistant resin **compn**. and/or photoresist)

L38 ANSWER 36 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:840721 HCAPLUS
DN 135:378746
TI **Resist composition** containing surfactants and pattern formation
IN Kubota, Hiroshi; Takemura, Katsuya; Yoshihara, Takao
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS C08L071-02; C08L101-00; G03F007-038; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001318459	A2	20011116	JP 2000-139537	20000512
	US 2001055727	A1	20011227	US 2001-851274	20010508
PRAI	JP 2000-139537	A	20000512		

AB The **resist compn**. contains .gtoreq.1 **fluorosurfactant** and .gtoreq.1 nonionic surfactant without substituent contg. fluorine or silicon. In the pattern formation, the **resist compn**. is coated on a substrate, heat-treated, exposed with high energy ray with .ltoreq.500 nm, x-ray, or electron beam through a photomask, optionally heat treated, and developed. The **compn**. shows good coating property without foaming and gives high resoln. patterns without defect.
ST **resist** pattern formation **fluoro surfactant**; nonionic surfactant radiation **resist compn**
IT Polyoxyalkylenes, uses
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(esters; radiation-sensitive **resist compn**. contg.

fluorosurfactant and nonionic **surfactant**)
IT Polyoxyalkylenes, uses
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(ethers; radiation-sensitive **resist compn.** contg. **fluorosurfactant** and nonionic **surfactant**)
IT **Surfactants**
(**fluorosurfactants**; radiation-sensitive **resist compn.** contg. **fluorosurfactant** and nonionic **surfactant**)
IT **Surfactants**
(nonionic; radiation-sensitive **resist compn.** contg. **fluorosurfactant** and nonionic **surfactant**)
IT Electron beam **resists**
(radiation-sensitive **resist compn.** contg. **fluorosurfactant** and nonionic **surfactant**)
IT **Resists**
(radiation-sensitive; radiation-sensitive **resist compn.** contg. **fluorosurfactant** and nonionic **surfactant**)
IT 9005-64-5, Rheodol TW-L 106 265991-57-9, Emulgen MS 110 **275364-62-0**, KH 20
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(radiation-sensitive **resist compn.** contg. **fluorosurfactant** and nonionic **surfactant**)
IT **275364-62-0**, KH 20
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(radiation-sensitive **resist compn.** contg. **fluorosurfactant** and nonionic **surfactant**)
RN 275364-62-0 HCAPLUS
CN KH 20 (surfactant) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L38 ANSWER 37 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:726601 HCAPLUS
DN 135:280511
TI Positive-working **photoresist compositions** showing high resolution and high sensitivity and excellent storage stability
IN Sato, Kenichiro
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 62 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08L101-08; G03F007-004; G03F007-075; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001272784	A2	20011005	JP 2000-385724	20001219
PRAI	JP 1999-363302	A	19991221		
	JP 2000-10773	A	20000119		

JP 2000-10774 A 20000119
OS MARPAT 135:280511
AB The **compns.** contain (A) compds. generating acid on irradn. of actinic ray or radiation, (B) polymers contg. structural repeating unit CO2CR1R2(CR3R4)mSiR5R6R7 (R1-2 = (cyclic) alkyl; R3-4 = H, (cyclic) alkyl; R1 + R2, R3 + R4 may form cyclic alkyl; R5-7 = (cyclic) alkyl, aryl, trialkylsilyl(oxy); m = integer of 1-6) and increasing soly. in alk. developing agents by reaction with acids, (C) org. basic compds., and (D) .gtoreq.1 of **F**-contg. **surfactants**, Si-contg. surfactants, and nonionic surfactants. Preferable structural repeating units also contained in the polymers are given in Markush. Also claimed are (1) **compns.** consisting of (A') acid-generating sulfonium salts Rs1S+ Rs2Rs3 Z- (Rs1-3 = (un)substituted alkyl or aryl; Rs1 + Rs2 may bond via single bond or bonding group; Z- = anion) and polymers B and (2) **compns.** consisting of acid generators A, polymers B, and certain surfactants given in the document. The **compns.** are useful in manuf. of semiconductor devices, printed circuits, liq. crystal panels, etc.
ST pos **photoresist** alk soluble silyl contg polymer; acid **generator** pos **photoresist** storage stable; sulfonium salt acid **generator** pos **photoresist**
IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(KP 341, **surfactant**; alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)
IT Positive **photoresists**
(alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)
IT Sulfonium compounds
RL: TEM (Technical or engineered material use); USES (Uses)
(alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)
IT **Surfactants**
(**fluorosurfactants**; alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)
IT **Surfactants**
(nonionic, **surfactant**; alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)
IT **Fluoropolymers**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)
IT 14159-45-6P 39153-56-5P 66003-76-7P 66003-78-9P 67695-82-3P
138529-81-4P 144089-15-6P 153698-46-5P 177786-98-0P 206861-54-3P
241806-75-7P 258341-95-6P 258341-99-0P 279218-73-4P 279218-74-5P
279218-75-6P 301525-08-6P 312386-77-9P 324771-13-3P 350251-56-8P
350251-57-9P 363616-18-6P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid generator; alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)
IT 263713-67-3P 363616-30-2P 363616-32-4P 363616-34-6P 363616-36-8P
363616-38-0P 363616-40-4P 363616-42-6P 363616-45-9P 363616-47-1P
363616-49-3P 363616-51-7P 363616-53-9P 363616-56-2P 363616-59-5P
363616-62-0P 363616-65-3P 363616-68-6P 363616-71-1P 363616-74-4P
363616-76-6P 363616-77-7P 363616-78-8P 363616-81-3P 363616-82-4P
363616-83-5P 363616-85-7P 363616-86-8P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
(alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)

IT 484-47-9, 2,4,5-Triphenyl imidazole 1122-58-3, 4-Dimethylamino pyridine 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene
RL: TEM (Technical or engineered material use); USES (Uses)
(alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)

IT 96-48-0, .gamma.-Butyrolactone 96-49-1, Ethylene carbonate 97-64-3, Ethyl lactate 108-32-7, Propylene carbonate 110-43-0, 2-Heptanone 123-86-4, Butyl acetate 1320-67-8, Propylene glycol monomethyl ether 14272-48-1, 2-Ethoxyethyl propionate 84540-57-8, Propylene glycol monomethyl ether acetate 98516-33-7, Propylene glycol monomethyl ether propionate
RL: TEM (Technical or engineered material use); USES (Uses)
(solvent; alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)

IT 9016-45-9, Polyoxyethylene nonylphenyl ether 137462-24-9, Megafac F176 216679-67-3, Megafac R08 364039-09-8, Troysol S 336
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; alk.-developing silyl-contg. polymer pos. **photoresists** having storage stability)

L38 ANSWER 38 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:709931 HCAPLUS
DN 135:280492
TI Photoimaging **compositions**, their films, and their cured products with low dielectric constant and good heat **resistance**
IN Matsuo, Yuichiro; Mori, Akira
PA Nippon Kayaku Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-027
ICS G03F007-027; C08F002-44; C08F002-48; C08F299-04; C08J005-18; G03F007-004; G03F007-028; C08L055-00
CC 74-4 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001264975	A2	20010928	JP 2000-79946	20000322
PRAI	JP 2000-79946		20000322		

AB Title materials, showing high pattern precision and good substrate adhesion, comprise (A) oligomers from polybasic acid anhydrides, diamines, and optional polyhydric alcs., (B) diluents, (C) photopolymn. initiators, (D) powders with dielec. const. .ltoreq.3.5, and optional (E) surfactants. The powders may be surface modified. The materials are useful for solder **resists** and interlayer insulators in IC fabrication.

ST dielec photoimaging **compn** heat **resistance** pattern precision; acrylic polyamide polyester polyoxyalkylene photoimaging film; PTFE bead contg dielec photoimaging material; surfactant contg photopolymerizable photoimaging film; circuit board solder **resist** photoimaging **compn**

IT Esters, uses
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered

material use); USES (Uses)
(aliph., **fluorinated, surfactants**; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Printed circuit boards
(copper-clad, glass-epoxy; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Heat-**resistant** materials
(dielec.; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Electric insulators
(heat-**resistant**; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Solder **resists**
Surfactants
(photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Photoimaging materials
(photopolymerizable; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Nitrile rubber, properties
RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(piperazine group-terminated, ATBN 1300X16, polymers with pyromellitic anhydride, ester with hydroxyethyl acrylate, reacted with acrylic monomers; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Fluoropolymers, properties
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(plasma-modified; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Polyoxyalkylenes, properties
RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-polyester-, acrylic; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Polyesters, properties
RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-polyoxyalkylene-, acrylic; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT Polyamides, properties
RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polyoxyalkylene-, acrylic; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT 9003-18-3P
RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(nitrile rubber, piperazine group-terminated, ATBN 1300X16, polymers

with pyromellitic anhydride, ester with hydroxyethyl acrylate, reacted with acrylic monomers; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT 89-32-7DP, Pyromellitic dianhydride, polymers with piperazine-terminated nitrile rubber, ester with hydroxyethyl acrylate, and reaction products with acrylic monomers 818-61-1DP, 2-Hydroxyethyl acrylate, ester with polymers of piperazine-terminated nitrile rubber and pyromellitic anhydride and polymers with acrylic monomers 26570-48-9DP, Kayarad PEG 400DA, reaction products with acrylate-terminated polymers 93294-97-4DP, Kayarad DPCA 60, reaction products with acrylate-terminated polymers 362661-92-5DP, reaction products with acrylate-terminated polymers of pyromellitic anhydride and nitrile rubber 362661-93-6P 362661-94-7P 362661-95-8P
RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT 9002-88-4, Flo-beads LE 1080 9010-77-9, Flo-beads EA 209
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT 10287-53-3, Kayacure EPA 82799-44-8, Kayacure DETX-S
RL: CAT (Catalyst use); USES (Uses)
(photopolymn. initiators; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT 9002-84-0, Polytetrafluoroethylene
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(plasma-modified; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

IT 151-21-3, Lauryl sulfate sodium salt, uses 1338-39-2, Sorbitan monolaurate
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(**surfactants**; photoimaging **compns.**, their films, and their cured products with low dielec. const. and good heat **resistance**)

L38 ANSWER 39 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:632162 HCAPLUS
DN 135:218722
TI Positive-working **photoresist composition** containing acetylene alcohol derivative
IN Kodama, Kunihiko; Sato, Kenichiro; Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 39 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08K005-05; C08K005-16; C08L101-12; G03F007-004; G03F007-032; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001235867	A2	20010831	JP 2000-47907	20000224
PRAI	JP 2000-47907		20000224		

AB The **photoresist compn.** comprises (A) a compd. for generating an acid by irradn. of actinic ray or radiation, (B) a resin having monocyclic or polycyclic aliph. hydrocarbon structure and decompg. by an acid to increase soly. in an alk. developer, and (C) an acetylene alc. deriv. Alternatively, the **compn.** comprises (A), (C), (D) a compd. having an acid-decomposable group and showing increased dissoln. rate by acid effect in an alk. developer for inhibiting dissoln. of a low-mol. compd. having mol. wt. .ltoreq.3000, and (E) a water-insol. and alkali developer-sol. resin. Optionally, the **compn.** comprises a N-contg. basic compd. and/or a F-type and/or silicone-type surfactant. The **compn.** provides high sensitivity in ArF excimer laser lithog., good developability with suppressed defects, resoln., and pattern profile.

ST pos working **photoresist compn** acetylenic alc deriv

IT Positive **photoresists**
Semiconductor device fabrication
Surfactants
(pos.-working **photoresist compn.** contg. acetylene alc. deriv.)

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**, KP 341, Troysol S 366; pos.-working **photoresist compn.** contg. acetylene alc. deriv.)

IT 9014-85-1
RL: MOA (Modifier or additive use); USES (Uses)
(Surfynol 440, Surfynol 465; pos.-working **photoresist compn.** contg. acetylene alc. deriv.)

IT 144089-15-6, Triphenylsulfonium perfluorooctane sulfonate 194999-85-4, Bis(4-tert-butylphenyl)iodonium perfluorobutanesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(acid **generator**; pos.-working **photoresist compn.** contg. acetylene alc. deriv.)

IT 177080-68-1P, 2-Methyl-2-adamantane methacrylate-mevalonic lactone methacrylate copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid-decomposable resin; pos.-working **photoresist compn.** contg. acetylene alc. deriv.)

IT 195000-67-0 195154-83-7 216308-45-1, Methacrylic acid-2-methyl-2-adamantane methacrylate-mevalonic lactone methacrylate copolymer 250378-10-0 288303-55-9 297156-40-2 304441-22-3 324770-96-9 357413-69-5 357413-70-8 357413-71-9
RL: TEM (Technical or engineered material use); USES (Uses)
(acid-decomposable resin; pos.-working **photoresist compn.** contg. acetylene alc. deriv.)

IT 122752-67-4, Cholic acid tert-butyl ester
RL: TEM (Technical or engineered material use); USES (Uses)
(dissoln. regulator; pos.-working **photoresist compn** . contg. acetylene alc. deriv.)

IT 66003-78-9, Triphenylsulfonium triflate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)

(**photoacid generator**; pos.-working **photoresist compn**. contg. acetylene alc. deriv.)

IT 126-86-3, Surfynol 104 58968-73-3, Surfynol PC 357426-77-8, Surfynol E 1004
RL: MOA (Modifier or additive use); USES (Uses)
(pos.-working **photoresist compn**. contg. acetylene alc. deriv.)

IT 484-47-9D, 2,4,5-Triphenylimidazole, amine compd. 3001-72-7D, 1,5-Diazabicyclo[4.3.0]-5-nonene, amine compd. 24544-04-5D, 2,6-Diisopropylaniline, amine compd.
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compn**. contg. acetylene alc. deriv.)

IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos.-working **photoresist compn** . contg. acetylene alc. deriv.)

L38 ANSWER 40 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:632161 HCAPLUS
DN 135:218721
TI Positive-working **photoresist composition** containing dialkylcarboxylic amide
IN Kodama, Kunihiko; Sato, Kenichiro; Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 40 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08K005-00; C08K005-20; C08L101-00; G03F007-004; G03F007-032; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001235866	A2	20010831	JP 2000-47815	20000224
PRAI	JP 2000-47815		20000224		

AB The **photoresist compn**. comprises (A) a compd. for generating an acid by irradn. of actinic ray or radiation, (B) a resin having monocyclic or polycyclic aliph. hydrocarbon structure and decompg. by an acid to increase soly. in an alk. developer, and (C) N,N-dialkylcarboxylic amide. Alternatively, the **compn**. comprises (A), (C), (D) a compd. having an acid-decomposable group and showing increased dissoln. rate by acid effect in an alk. developer for inhibiting dissoln. of a low-mol. compd. having mol. wt. .ltoreq.3000, and (E) a water-insol. and alkali developer-sol. resin. Optionally, the **compn**. comprises a N-contg. basic compd. and/or a F-type and/or silicone-type surfactant. The **compn**. provides high sensitivity in ArF excimer laser lithog., good developability with suppressed defects, resoln., and pattern profile.

ST pos working **photoresist compn** dialkylcarboxylic amide
IT Positive **photoresists**
Semiconductor device fabrication
Surfactants
(pos.-working **photoresist compn**. contg.

dialkylcarboxylic amide)
IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos.-working **photoresist compn**
. contg. dialkylcarboxylic amide)
IT 177080-68-1P, 2-Methyl-2-adamantane methacrylate-mevalonic lactone methacrylate copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid-decomposable resin; pos.-working **photoresist compn**. contg. dialkylcarboxylic amide)
IT 195000-67-0 195154-83-7 216308-45-1 250378-10-0 288303-55-9 297156-40-2 304441-22-3 324770-96-9 357413-69-5 357413-70-8 357413-71-9
RL: TEM (Technical or engineered material use); USES (Uses)
(acid-decomposable resin; pos.-working **photoresist compn**. contg. dialkylcarboxylic amide)
IT 122752-67-4, Cholic acid tert-butyl ester
RL: TEM (Technical or engineered material use); USES (Uses)
(dissoln. regulator; pos.-working **photoresist compn**
. contg. dialkylcarboxylic amide)
IT 66003-78-9, Triphenylsulfonium triflate 144089-15-6, Triphenylsulfonium perfluorooctane sulfonate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate 194999-85-4, Bis(4-tert-butylphenyl)iodonium perfluorobutanesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; pos.-working **photoresist compn**. contg. dialkylcarboxylic amide)
IT 68-12-2, N,N-Dimethylformamide, uses 127-19-5, N,N-Dimethylacetamide 1502-00-7 17566-51-7, N,N-Dimethylcyclohexanecarboxamide 86678-85-5, N,N-Dimethylcholic acid amide
RL: MOA (Modifier or additive use); USES (Uses)
(pos.-working **photoresist compn**. contg. dialkylcarboxylic amide)
IT 484-47-9D, 2,4,5-Triphenylimidazole, amine compd. 3001-72-7D, 1,5-Diazabicyclo[4.3.0]-5-nonene, amine compd. 24544-04-5D, 2,6-Diisopropylaniline, amine compd.
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compn**. contg. dialkylcarboxylic amide)
IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; pos.-working **photoresist compn**
. contg. dialkylcarboxylic amide)

L38 ANSWER 41 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:598429 HCAPLUS
DN 135:173031
TI Photothermographic material
IN Takamuki, Yasuhiko
PA Japan
SO U.S. Pat. Appl. Publ., 19 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM G03C001-498
ICS G03C001-34
NCL 430523000

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001014433	A1	20010816	US 2001-757677	20010110
	US 6468725	B2	20021022		
	JP 2001264935	A2	20010928	JP 2000-370082	20001205
PRAI	JP 2000-3444	A	20000112		

AB A photothermog. material is disclosed, comprising a support having on one side of the support a light-sensitive layer contg. a light-sensitive silver halide, an org. silver salt, a reducing agent and a binder, and at least one protective layer, wherein the light-sensitive layer has a silver content of 0.10 to 0.45 g/cm and a dry thickness of 1 to 10 .mu.m, and a total dry protective layer thickness being 3 to 20 .mu.m.

ST thermally developable photothermog material

IT Silica gel, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(Syloid 320; thermally developable photothermog. material from org. silver contg. carboxy group and diisocyanate compd.)

IT Photothermographic copying
Surfactants
(thermally developable photothermog. material from org. silver contg. carboxy group and diisocyanate compd.)

IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(thermally developable photothermog. material from org. silver contg. carboxy group and diisocyanate compd.)

IT 9004-36-8, CAB 171-15
RL: TEM (Technical or engineered material use); USES (Uses)
(CAB 171-15; thermally developable photothermog. material from org. silver contg. carboxy group and diisocyanate compd.)

IT 95-14-7, 1H-Benzotriazole 1314-60-9, Sun Colloid AME-130 7631-86-9, Silica, uses 9010-92-8, Methacrylic acid-styrene copolymer 9011-14-7, Paraloid A 21 67006-32-0, 1,3-Bis(vinylsulfonyl)-2-hydroxypropane 79487-16-4, Acrylic acid-butyl acrylate-divinylbenzene-methyl methacrylate copolymer 106391-93-9, Acrylic acid-isononyl acrylate copolymer 154195-79-6, 2,2-Bis(hydroxymethyl)propionic acid-4,4'-diphenyl-methane diisocyanate-hexamethylene diisocyanate-triethylene glycol copolymer **251907-30-9**, Surflon KH40 253157-17-4, Vitel 2200B
RL: TEM (Technical or engineered material use); USES (Uses)
(thermally developable photothermog. material from org. silver contg. carboxy group and diisocyanate compd.)

IT **251907-30-9**, Surflon KH40
RL: TEM (Technical or engineered material use); USES (Uses)
(thermally developable photothermog. material from org. silver contg. carboxy group and diisocyanate compd.)

RN 251907-30-9 HCAPLUS

CN Surflon KH 40 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L38 ANSWER 42 OF 77 HCAPLUS COPYRIGHT 2003 ACS

AN 2001:595544 HCAPLUS

DN 135:187705

TI Positive-working **photoresist composition** for excimer layer

IN Kawabe, Yasumasa; Yamanaka, Tsukasa
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 38 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08L025-18; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001222110	A2	20010817	JP 2000-33621	20000210
PRAI	JP 2000-33621		20000210		

AB The pos. **photoresist compn.** contains (A) a compd. generating acid by the irradn. of actinic ray or radiation, (B) a resin which is insol. or slightly sol. in alkali and becomes sol. in alkali by the action of an acid, (C) a carboxylic anhydride with mol. wt. .ltoreq.1000, (D) N-contg. basic compd., and (E) a **fluorosurfactant** and/or a silicone surfactant. The **resist compn.** is useful for KrF excimer laser irradn., gives clear patterns without defect, and useful for semiconductor device manuf.

ST pos **photoresist** acid **generator**; hydroxystyrene polymer ether **photoresist**; carboxylic anhydride basic compd **photoresist**; **fluoro** silicone **surfactant photoresist**

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341; pos. **photoresist compn.** contg. acid **generator**, resin, carboxylic anhydride, basic compd. and **surfactant**)

IT **Surfactants**
(**fluorosurfactants**; pos. **photoresist compn**. contg. acid **generator**, resin, carboxylic anhydride, basic compd. and **surfactant**)

IT Positive **photoresists**
(pos. **photoresist compn.** contg. acid **generator**, resin, carboxylic anhydride, basic compd. and **surfactant**)

IT Semiconductor device fabrication
(pos. **photoresist compn.** contg. acid **generator**, resin, carboxylic anhydride, basic compd. and **surfactant** for manuf. of semiconductor device)

IT **Surfactants**
(silicone; pos. **photoresist compn.** contg. acid **generator**, resin, carboxylic anhydride, basic compd. and **surfactant**)

IT 197447-16-8
RL: TEM (Technical or engineered material use); USES (Uses)
(acid **generator**; pos. **photoresist compn.** contg. acid **generator**, resin, carboxylic anhydride, basic compd. and **surfactant**)

IT 11114-17-3, Fluorad FC 430 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)
(pos. **photoresist compn.** contg. acid **generator,** resin, carboxylic anhydride, basic compd. and **surfactant**)

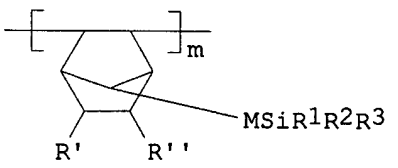
IT 100-51-6DP, Benzyl alcohol, ethers with poly(hydroxystyrene) 109-92-2DP, Ethyl vinyl ether, ethers with poly(hydroxystyrene) 926-02-3DP, tert-Butyl vinyl ether, ethers with poly(hydroxystyrene) 4442-79-9DP, Cyclohexylethanol, ethers with poly(hydroxystyrene) 24979-70-2DP, VP 8000, ethers 24979-78-0DP, Poly(p-acetoxystyrene), hydrolyzed, ethers 95418-60-3DP, Poly(p-tert-butoxystyrene), hydrolyzed, ethers
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **photoresist compn.** contg. acid **generator,** resin, carboxylic anhydride, basic compd. and **surfactant**)

IT 108-30-5, Succinic anhydride, uses 484-47-9, 2,4,5-Triphenylimidazole 2170-03-8, Itaconic anhydride 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene 13912-65-7 53414-07-6 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 71214-83-0 138529-81-4 212563-23-0
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoresist compn.** contg. acid **generator,** resin, carboxylic anhydride, basic compd. and **surfactant**)

L38 ANSWER 43 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:541847 HCAPLUS
DN 135:129575
TI Positive **photoresist compositions** containing norbornene polymers bearing silicon-containing branches
IN Mizutani, Kazuyoshi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 42 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-075
ICS C08F230-08; C08L043-04; G03F007-004; G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001201860	A2	20010727	JP 2000-8042	20000117
PRAI	JP 2000-8042		20000117		

GI



I

AB The pos. **photoresist compns.** contain polymers contg.

repeating units bearing groups forming acid groups by acidolysis and repeating units shown as I (R1-3 = alkyl, haloalkyl, halo, alkoxy, trialkylsilyl, trialkylsilyloxy; M = single bond, divalent linkage; R', R'' = H, trialkylmethylsilyl, trialkylmethylsilylmethyl, Cl2Si, trialkoxysilyl, dialkoxymethylsilyl, COA; A = OH, OB, NHB; B = alkyl; R' and R'' may be linked together via alkylene, CO2CO, CONR'''CO and thereby form ring; R' and R'' may be united, form alkylene, CO2CO, CONR'''CO and thereby form ring; R''' = H, OH, alkyl, OSO2R''''; R'''' = alkyl, trihalomethyl). The acid group-forming repeating units may be CH2CY(LCO2Q) (Y = H, Me, CN, Cl; L = single bond, divalent linkage; Q = H, group forming CO2H by acidolysis) or CH[C(O)X2L2A2]CH[C(O)X1L1A1] (X1, X2 = O, S, NH, NHSO2; L1, L2 = single bond, divalent linkage; A1 = Q, CO2Q; when X1 = O and L1 = single bond, A1 = Q; A2 = H, CN, OH, CO2H, CO2R', COCNHR'', alkyl, cyclic hydrocarbyl, alkoxy, CO2Q; R', R'' = alkyl; Q = H, group forming CO2H by acidolysis). The polymers may contain repeating units derived from maleic anhydride or (N-substituted) maleimides. Preferably, the **compns.** comprise (A) the above-mentioned polymers, (B) actinic light- or radiation-sensitive acid generators, (C) org. solvents, and optionally (D) org. basses, and (E) surfactants. The **compns.** have high sensitivity yet high resoln., give rectangular patterns with reduced edge roughness of line patterns, and suppressed pattern shifts on pattern transfer to the lower **resist** layers in O plasma etching process and are suitable for upper layers for bilayered **resists.** Their pattern formation using ArF excimer laser was exemplified.

ST pos **photoresist** norbornene polymer silicon branch; acrylate norbornene copolymer pos **photoresist**; methacrylate norbornene copolymer pos **photoresist**; maleic acid deriv norbornene copolymer pos **photoresist**; maleimide norbornene copolymer pos **photoresist**; deep UV **resist** norbornene polymer silicon branch; chem amplified **resist** pos norbornene polymer

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(KP 341, **surfactants**; pos. **photoresist compns.** contg. norbornene polymers bearing silicon-contg. branches)

IT Positive **photoresists**
(UV, deep UV, chem. amplified; pos. **photoresist compns.** contg. norbornene polymers bearing silicon-contg. branches)

IT Positive **photoresists**
(chem. amplified; pos. **photoresist compns.** contg. norbornene polymers bearing silicon-contg. branches)

IT Cycloalkenes
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymers; pos. **photoresist compns.** contg. norbornene polymers bearing silicon-contg. branches)

IT 13891-29-7, Triphenylsulfonium tosylate 66003-76-7, Diphenyliodonium triflate 144317-44-2 153698-46-5, Triphenylsulfonium pentafluorophenylsulfonate 197447-16-8, Triphenylsulfonium 2,4,6-triisopropylphenylsulfonate 251463-24-8 287925-54-6, Bis(p-tert-amylphenyl)iodonium tosylate 287925-55-7, Triphenylsulfonium p-dodecylphenylsulfonate 335385-79-0
RL: CAT (Catalyst use); USES (Uses)
(acid **generator**; pos. **photoresist compns.** contg. norbornene polymers bearing silicon-contg. branches)

IT 762-72-1, Allyltrimethylsilane 351186-90-8

RL: RCT (Reactant); RACT (Reactant or reagent)
(monomer starting material; pos. **photoresist compns**
. contg. norbornene polymers bearing silicon-contg. branches)

IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine
6674-22-2, 1,8-Diazabicyclo[5.4.0]undec-7-ene
RL: MOA (Modifier or additive use); USES (Uses)
(polymer dissoln. promoters; pos. **photoresist compns**
. contg. norbornene polymers bearing silicon-contg. branches)

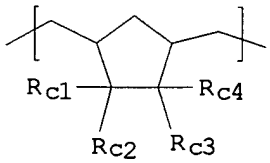
IT 351186-91-9P 351186-92-0P 351186-93-1P 351186-95-3P 351186-97-5P
351186-99-7P 351187-00-3P 351187-01-4P 351187-02-5P 351187-03-6P
351187-04-7P 351187-05-8P 351187-06-9P 351187-07-0P 351187-09-2P
351187-11-6P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **photoresist compns**. contg. norbornene polymers bearing silicon-contg. branches)

IT 9016-45-9, Polyoxyethylene nonylphenyl ether 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactants**; pos. **photoresist compns**.
contg. norbornene polymers bearing silicon-contg. branches)

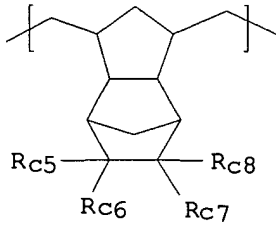
L38 ANSWER 44 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:541843 HCAPLUS
DN 135:129573
TI Deep UV positive **photoresist compositions** containing norbornene- or dicyclopentadiene-based polymers
IN Mizutani, Kazuyoshi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 30 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; G03F007-095; G03F007-26; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001201855	A2	20010727	JP 2000-8239	20000117
PRAI	JP 2000-8239		20000117		

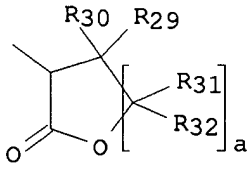
GI



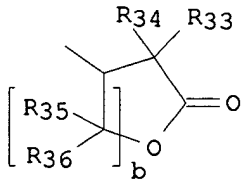
I



II



III



IV

AB The **photoresist compns.** contain (A) active light- or radiation-sensitive acid generators and (B) resins whose solubilities into alk. solns. are increased by acidolysis and which involve repeating units norbornene derivs. I and/or dicyclopentadiene derivs. II [Rc1-Rc8 = H, (substituted) alkyl, (substituted) cyclohydrocarbyl, halo, cyano, CO2H, C(O)YARc9, C(O)YACO2(CH2)2SiR1R2R3, CO2Rc11, CO2(CH2)2SiR1R2R3; .gtoreq.1 of Rc1-Rc4 = C(O)YACO2(CH2)2SiR1R2R3 or CO2(CH2)2SiR1R2R3; .gtoreq.1 of Rc5-Rc8 = C(O)YACO2(CH2)2SiR1R2R3 or CO2(CH2)2SiR1R2R3; R1-R3 = alkyl, trialkylsilyl, trialkylsilyloxy; Y = O, S, NH, NHSO2, NHSO2NH; Rc9 = CO2H, CO2Rc10 (Rc10 = same as Rc11 or lactones III or IV), CN, OH, (substituted) alkoxyl, CONHRc11, CONHSO2Rc11, or lactones III or IV; Rc11 = (substituted) alkyl, (substituted) cycloalkyl; A = single bond; alkylene, substituted alkylene, O, S, CO, CO2, amide, sulfonamide, urethane, urea; R29-R36 = H, alkyl; a, b = 1, 2]. The **compns.** may further contain (C) org. bases, (D) silicone-based, F-contg., or nonionic surfactants and (E) org. solvents. In the bilayer **resist** process, pattern shift on pattern transfer to underlayers while O plasma etching is minimized. Its pattern formation on i-ray **resist** coated on a Si wafer by exposing to ArF excimer laser was exemplified.

ST deep UV pos **photoresist** norbornene polymer; cyclopentadiene trimethylsilylethyl acrylate reaction polymn **photoresist**; methoxyethyl acrylate cyclopentadiene reaction polymn **photoresist** ; dicyclopentadiene polymer deep UV pos **photoresist**; argon fluoride excimer laser **photoresist**

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(KP 341, **surfactants**; deep UV pos. **photoresist compns.** contg. norbornene- or dicyclopentadiene-based polymers)

IT Positive **photoresists**
(UV; deep UV pos. **photoresist compns.** contg. norbornene- or dicyclopentadiene-based polymers)

IT Cycloalkenes
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymers; deep UV pos. **photoresist compns.** contg. norbornene- or dicyclopentadiene-based polymers)

IT 351195-80-7DP, hydrogenated
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
(deep UV pos. **photoresist compns**. contg. norbornene- or dicyclopentadiene-based polymers)

IT 351195-81-8D, hydrogenated 351195-82-9D, hydrogenated 351195-84-1D, hydrogenated
RL: TEM (Technical or engineered material use); USES (Uses)
(deep UV pos. **photoresist compns**. contg. norbornene- or dicyclopentadiene-based polymers)

IT 57840-38-7 66003-76-7 66003-78-9 144089-15-6 153698-46-5 335385-79-0 335385-81-4 335385-82-5
RL: CAT (Catalyst use); USES (Uses)
(**photoacid generator**; deep UV pos. **photoresist compns**. contg. norbornene- or dicyclopentadiene-based polymers)

IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 6674-22-2, 1,8-Diazabicyclo[5.4.0]undec-7-ene
RL: MOA (Modifier or additive use); USES (Uses)
(polymer dissoln. promoters; deep UV pos. **photoresist compns**. contg. norbornene- or dicyclopentadiene-based polymers)

IT 121-46-0, Norbornadiene 3121-61-7, 2-Methoxyethyl acrylate 131494-24-1, 2-(Trimethylsilyl)ethyl acrylate
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting materials for monomer prepn.; deep UV pos. **photoresist compns**. contg. norbornene- or dicyclopentadiene-based polymers)

IT 9016-45-9, Poly(oxyethylene) nonylphenyl ether 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactants**; deep UV pos. **photoresist compns**. contg. norbornene- or dicyclopentadiene-based polymers)

L38 ANSWER 45 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:496392 HCAPLUS
DN 135:99845
TI Positive-working **photoresist composition** containing alkali-soluble polymer with silyl group
IN Mizutani, Kazuyoshi; Yanami, Shoichiro
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 52 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08F030-08; C08K005-00; C08L043-04; C08L101-00; G03F007-004; G03F007-075; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 76

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001188349	A2	20010710	JP 2000-303876	20001003
PRAI	JP 1999-298606	A	19991020		

AB The **compn**. comprises (A) a binder resin having a repeating unit bearing a structure (CH2)nSiR1R2R3 (R1-3 = alkyl, haloalkyl, halo, alkoxy, trialkylsilyl, trialkylsilyloxy; n = 0, 1) and a repeating unit bering a group which decomps. by the action of an acid and increases the soly. in an alk. developer at the side chain, (B) a compd. generating an acid by

the action of an actinic ray or radiation, (C) a solvent dissolving A and B, (D) an org. base compd., (E) .gtoreq.1 surfactant selected from a **fluorosurfactant**, a silicone **surfactant**, and a nonionic surfactant. The **compn.** shows high resoln. and gives patterns with rectangular cross section and is useful for manuf. of semiconductor device.

ST **photoresist** pos alkali soluble binder silyl group; acid **generator photoresist**; surfactant **photoresist** org base

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341; pos.-working **photoresist compn.** contg. binder with silyl group, acid generator, org. base, and **surfactant**)

IT **Surfactants**
(**fluorosurfactants**; pos.-working **photoresist compn.** contg. binder with silyl group, acid generator, org. base, and **surfactant**)

IT **Surfactants**
(nonionic; pos.-working **photoresist compn.** contg. binder with silyl group, acid generator, org. base, and **surfactant**)

IT Positive **photoresists**
(pos.-working **photoresist compn.** contg. binder with silyl group, acid generator, org. base, and **surfactant**)

IT **Surfactants**
(silicone; pos.-working **photoresist compn.** contg. binder with silyl group, acid generator, org. base, and **surfactant**)

IT 1122-58-3, DMAP 3001-72-7, DBN 6674-22-2, DBU 9016-45-9, Polyoxyethylene nonyl phenyl ether 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compn.** contg. binder with silyl group, acid generator, org. base, and **surfactant**)

IT 249743-11-1P 314295-77-7P 336609-21-3P 336609-24-6P 336609-25-7P 336609-27-9P 336609-31-5P, tert-Butyl acrylate-maleic anhydride-trimethylallylsilane-daljsdhf copolymer 340829-95-0P 348129-27-1P 348129-35-1P 348129-37-3P 348129-40-8P 348129-42-0P 348129-43-1P 348129-45-3P 348129-49-7P 348129-52-2P 348129-55-5P 349477-30-1P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working **photoresist compn.** contg. binder with silyl group, acid generator, org. base, and **surfactant**)

IT 57835-99-1, Triphenylsulfonium hexafluorophosphate 144089-15-6 144317-44-2, Triphenylsulfonium nonaflate 153698-46-5, Triphenylsulfonium pentafluorophenylsulfonate 197447-16-8, Triphenylsulfonium 2,4,6-triisopropylphenylsulfonate 258872-05-8 287925-54-6, Bis(p-tert-amylphenyl)iodonium tosylate 343629-51-6 348129-65-7
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist compn.** contg. binder with silyl group, acid generator, org. base, and **surfactant**)

L38 ANSWER 46 OF 77 HCAPLUS COPYRIGHT 2003 ACS

AN 2001:485430 HCAPLUS
DN 135:84315
TI Resist image formation and undercoat resin **composition** for it
IN Kasuya, Kei; Kato, Koji
PA Hitachi Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-11
ICS G03F001-08; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001183843	A2	20010706	JP 1999-370131	19991227
PRAI	JP 1999-370131		19991227		

AB The undercoat resin **compn.** contains poly(vinyl Me ether) and a **fluorosurfactant.** The image is formed according to the steps; (1) coating the undercoat resin **compn.** on a mask blank, (2) coating a pos.-working chem. amplification-type **photoresist** on it, and (3) irradiating an actinic ray and developing. Influence of the mask blank is removed by using the undercoat layer and **resist** pattern with rectangular cross section is obtained.
ST photoresist undercoat layer vinyl methyl ether polymer; fluoro surfactant undercoat layer photoresist
IT Surfactants
(**fluorosurfactants; photoresist** image formation using undercoat resin **compn.** contg. poly(vinyl Me ether) and **fluorosurfactant**)
IT Positive **photoresists**
(**photoresist** image formation using undercoat resin **compn.** contg. poly(vinyl Me ether) and **fluorosurfactant**)
IT 9003-09-2, P 0384
RL: TEM (Technical or engineered material use); USES (Uses)
(P 0384; **photoresist** image formation using undercoat resin **compn.** contg. poly(vinyl Me ether) and **fluorosurfactant**)
IT 29081-56-9, Fluorad FC-93
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist** image formation using undercoat resin **compn.** contg. poly(vinyl Me ether) and **fluorosurfactant**)

L38 ANSWER 47 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:469374 HCAPLUS
DN 135:84296
TI Radiation-sensitive chemically amplified negative-working **resist compositions** containing vinylbenzodioxole derivatives polymers
IN Adekawa, Yutaka
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 30 pp.
CODEN: JKXXAF
DT Patent
LA Japanese

IC ICM G03F007-038
ICS C08F002-54; C08K005-00; C08L025-18; G03F007-004; G03F007-033; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001174994	A2	20010629	JP 1999-358016	19991216
PRAI	JP 1999-358016		19991216		

OS MARPAT 135:84296
AB The **resist compns.** contain (A) alk.-sol. resins involving structure units of 4-vinyl-1,3-benzodioxole derivs., compds. which generate acids by electron beam or x-ray irradn., acid-crosslinkable crosslinking agents, and optionally F- and/or silicone-based surfactants. The **compns.** satisfy properties of sensitivity, developability, and **resist** pattern profiles to the use of electron beam or x-ray.
ST radiation sensitive chem amplified neg **resist**; vinylbenzodioxole polymer alkali soly neg **resist**
IT **Surfactants**
(**F**- and/or silicone-based; radiation-sensitive chem. amplified neg.-working **resist compns.** contg. vinylbenzodioxole deriv. polymers)
IT **Resists**
(neg.-working radiation-sensitive; radiation-sensitive chem. amplified neg.-working **resist compns.** contg. vinylbenzodioxole deriv. polymers)
IT Electron beam **resists**
(neg.-working; radiation-sensitive chem. amplified neg.-working **resist compns.** contg. vinylbenzodioxole deriv. polymers)
IT X-ray **resists**
(neg.; radiation-sensitive chem. amplified neg.-working **resist compns.** contg. vinylbenzodioxole deriv. polymers)
IT Crosslinking agents
(radiation-sensitive chem. amplified neg.-working **resist compns.** contg. vinylbenzodioxole derivs. polymers)
IT Polysiloxanes, uses
RL: **MOA (Modifier or additive use)**; USES (Uses)
(**surfactant**; radiation-sensitive chem. amplified neg.-working **resist compns.** contg. vinylbenzodioxole derivs. polymers)
IT 66003-78-9 157826-08-9
RL: **MOA (Modifier or additive use)**; USES (Uses)
(acid generator; radiation-sensitive chem. amplified neg.-working **resist compns.** contg. vinylbenzodioxole derivs. polymers)
IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate 258341-98-9P
RL: **MOA (Modifier or additive use)**; PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(acid generator; radiation-sensitive chem. amplified neg.-working **resist compns.** contg. vinylbenzodioxole derivs. polymers)
IT 161679-94-3P 162846-57-3P
RL: **MOA (Modifier or additive use)**; PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or

reagent); USES (Uses)
(crosslinking agent; radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole derivs. polymers)

IT 3089-11-0 32449-09-5 161679-98-7 185502-11-8 185502-14-1 197087-73-3 197087-74-4 346694-57-3 346694-58-4
RL: **MOA (Modifier or additive use)**; RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(crosslinking agent; radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole derivs. polymers)

IT 3744-08-9P, Triphenylsulfonium iodide 258342-09-5P 270564-02-8P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate for acid generator; radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole derivs. polymers)

IT 346694-37-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole deriv. polymers)

IT 346694-39-1P 346694-41-5P 346694-43-7P 346694-45-9P 346694-47-1P 346694-48-2P 346694-50-6P 346694-51-7P 346694-53-9P 346694-54-0P 346694-55-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole derivs. polymers)

IT 945-51-7, Diphenyl sulfoxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for acid generator; radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole derivs. polymers)

IT 832-53-1, Pentafluorobenzenesulfonyl chloride 2049-95-8, tert-Amylbenzene
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material for acid generator; radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole derivs. polymers)

IT 110726-28-8, 1-[.alpha.-Methyl-.alpha.-(4-hydroxyphenyl)ethyl]-4-[.alpha.,.alpha.-bis(4-hydroxyphenyl)ethyl]benzene
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material for crosslinking agent; radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole derivs. polymers)

IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: **MOA (Modifier or additive use)**; USES (Uses)
(**surfactant**; radiation-sensitive chem. amplified neg.-working **resist compns**. contg. vinylbenzodioxole derivs. polymers)

L38 ANSWER 48 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:423557 HCAPLUS
DN 135:38893
TI Positive **photoresist compositions** for manufacture of semiconductor devices
IN Sato, Kenichiro; Kodama, Kunihiko; Mizutani, Kazuyoshi

PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 66 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-004; G03F007-039; G03F007-075; H01L021-027; C07C025-18; C07C381-12
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001159812	A2	20010612	JP 1999-343714	19991202
	US 6506535	B1	20030114	US 2000-698221	20001030
PRAI	JP 1999-307317	A	19991028		
	JP 1999-331785	A	19991122		
	JP 1999-338487	A	19991129		
	JP 1999-343714	A	19991202		

OS MARPAT 135:38893
AB The **compns**. contain (A) .gtoreq.1 compds., generating sulfonic acids by irradn. of actinic light beam or radiation, selected from Markush structures in the document, (B) polymers, whose soly. in alkali developers is increased by acids, having specified Si-contg. structural repeating units and specified C:O-contg. structural repeating units, (C) .gtoreq.1 solvents for A and B, (D) org. basic compds., and (E) .gtoreq.1 **surfactants** selected from **F** compds., Si compds., and nonionic compds. The **compns**. show small change in isolated line width for exposure amt.
ST pos **photoresist** exposure margin semiconductor fabrication; sulfonic acid **generator** pos **photoresist** semiconductor; silyl polymer acid decomposable pos **photoresist** semiconductor; surfactant pos **photoresist** exposure margin semiconductor
IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(KP 341, **surfactants**; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)
IT Positive **photoresists**
Semiconductor device fabrication
Surfactants
(improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)
IT 337954-60-6P 337954-62-8P 337954-64-0P 337954-66-2P 337954-68-4P 337954-71-9P 337954-76-4P 343629-38-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid-decomposable polymers; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)
IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 6674-22-2, DBU
RL: MOA (Modifier or additive use); USES (Uses)
(improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)
IT 343629-32-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomers for acid-decomposable polymers; improvement of exposure

margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 144089-15-6 144317-44-2 241806-76-8 258341-95-6 258341-99-0
301525-08-6 312386-77-9 338445-30-0 338445-31-1 338445-34-4
343629-44-7 343629-47-0 343629-51-6 343629-53-8 343629-55-0
343629-57-2 343629-58-3
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generators**; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 90913-72-7 343629-30-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactants in prepn. of monomers for acid-decomposable polymers; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 9016-45-9, Polyoxyethylene nonylphenyl ether 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactants**; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

L38 ANSWER 49 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:421234 HCAPLUS
DN 135:53496
TI Positive **photoresist compositions** for manufacture of semiconductor devices
IN Sato, Kenichiro; Kodama, Kunihiko; Mizutani, Kazuyoshi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 59 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; G03F007-031; G03F007-075
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001159822	A2	20010612	JP 1999-343713	19991202
PRAI	JP 1999-343713		19991202		

OS MARPAT 135:53496
AB The **compns**. contain (A) .gtoreq.1 compds., generating sulfonic acids by irradn. of actinic light beam or radiation, selected from Markush structures in the document, (B) acid-decomposable polymers, whose soly. in alkali developers is increased by acids, having specified Si-contg. structural repeating units and specified C:O-contg. structural repeating units, (C) .gtoreq.1 solvents for A and B, (D) org. basic compds., and (E) .gtoreq.1 **surfactants** selected from **F** compds., Si compds., and nonionic compds. The **compns**. show small change in isolated line width for exposure amt.
ST pos **photoresist** exposure margin semiconductor fabrication; sulfonic acid **generator** pos **photoresist** semiconductor; silyl polymer acid decomposable pos **photoresist** semiconductor; surfactant pos **photoresist** exposure margin semiconductor
IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); USES (Uses)

(KP 341, **surfactants**; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT Positive **photoresists**
Semiconductor device fabrication
Surfactants
(improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 335385-72-3P 335385-77-8P 340977-48-2P 340977-50-6P 340977-52-8P 340977-54-0P 343329-10-2P 344448-45-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid-decomposable polymers; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 6674-22-2, DBU
RL: MOA (Modifier or additive use); USES (Uses)
(improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 335385-69-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomers for acid-decomposable polymers; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 144089-15-6 144317-44-2 241806-76-8 258341-95-6 258341-99-0 301525-08-6 312386-77-9 338445-30-0 338445-31-1 338445-34-4 343629-44-7 343629-47-0 343629-51-6 343629-53-8 343629-55-0 343629-57-2 343629-58-3
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generators**; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 814-68-6, Acrylic acid chloride 90913-72-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactants in prepn. of monomers for acid-decomposable polymers; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

IT 9016-45-9, Polyoxyethylene nonylphenyl ether 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactants**; improvement of exposure margin in pos. **photoresists** for manuf. of semiconductor devices)

L38 ANSWER 50 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:388948 HCAPLUS
DN 135:12122
TI Positive-working **photoresist composition** containing sulfonium compound acid generator
IN Sato, Kenichiro; Mizutani, Kazuyoshi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 65 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS C08F222-02; C08F222-06; C08F222-40; C08F232-08; C08K005-103; C08K005-16; C08K005-36; C08L035-00; C08L045-00; C08L071-02; G03F007-004; H01L021-027; C07C381-12

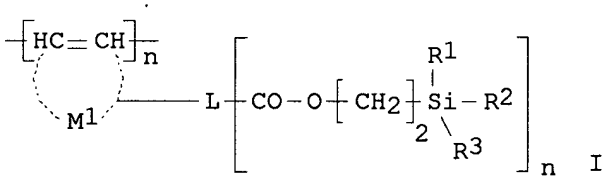
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 76

FAN.CNT 4

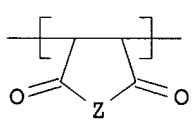
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001147536	A2	20010529	JP 1999-331785	19991122
	US 6506535	B1	20030114	US 2000-698221	20001030
PRAI	JP 1999-307317	A	19991028		
	JP 1999-331785	A	19991122		
	JP 1999-338487	A	19991129		
	JP 1999-343714	A	19991202		

OS MARPAT 135:12122

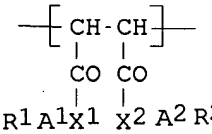
GI



I



II



III

AB The **compn.** comprises (A) a sulfonium compd. R1R2R3S+.Z- [R1-3 = (substituted) alkyl, (substituted) aryl; Z- = counter anion] which generates an acid by the action of the actinic ray or radiation, (B) an acid-decomposable resin having repeating units I (M1 = atoms forming alicyclic structure; n = 1, 2; L = bond, linkage with (n + 1) valences; R', R'', R''' = alkyl, Ph, trialkylsilyl,trialkylsilyloxy) and .gtoreq.1 of II and III (Z = O, NR3; R3 = H, alkyl, OSO2R4; R4 = alkyl, trihalomethyl; X1-2 = H, S, NH, NHSO2; A1-2 = bond, divalent linkage; R1-2 = H, CN, OH, CO2H, CO2R5, CONHR6, alkyl, alkoxy, cyclic hydrocarbon which may have ester or carbonyl group in ring-forming bond; R5 = alkyl, cyclic hydrocarbon which may have ester or carbonyl group in ring-forming bond; R6 = alkyl), (C) .gtoreq.1 solvent dissolving (A) and (B), (D) an org. base compd., and (E) .gtoreq.1 **surfactant** selected from **F**-, Si-, and nonionic surfactant. Particle generation in the **resist** soln. is prevented, the **compn.** shows high sensitivity and resoln. and is useful for manuf. of contact hole patterns in semiconductor device fabrication.

ST **photoresist** pos sulfonium acid **generator**; surfactant **photoresist** semiconductor device manuf; resin acid decomposable **photoresist**; org base compd **photoresist**

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341; **photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, basic compd. and **surfactant**)

IT **Photoresists**
Surfactants
(**photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, basic compd. and **surfactant**)

IT Sulfonium compounds
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, basic compd. and **surfactant**)

IT Semiconductor device fabrication
(**photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, basic compd. and **surfactant** for manuf. of semiconductor device)

IT 66003-78-9 153698-46-5 177786-98-0 206861-54-3 258341-99-0 260061-58-3 279218-75-6 301525-08-6 335385-81-4 341990-03-2 341990-05-4
RL: TEM (Technical or engineered material use); USES (Uses)
(acid **generator; photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, basic compd. and **surfactant**)

IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 6674-22-2, DBU 9016-45-9, Polyoxyethylene nonyl phenyl ether 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, basic compd. and **surfactant**)

IT 337954-60-6P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, basic compd. and **surfactant**)

IT 337954-62-8 337954-64-0 337954-66-2 337954-68-4 337954-71-9 337954-74-2 337954-76-4
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, basic compd. and **surfactant**)

L38 ANSWER 51 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:388940 HCAPLUS
DN 135:12115
TI Positive-working **photoresist composition** containing sulfonium compound acid generator, acid-decomposable polymer, and surfactant
IN Kodama, Kunihiko; Sato, Kenichiro; Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 46 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001147524	A2	20010529	JP 1999-328589	19991118
PRAI	JP 1999-328589		19991118		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The **compn.** comprises (A) acid generator Ph3S+.X- and/or I (X- = RSO3-; R =C.gtoreq.2 alkyl substituted with F) which generates an acid by the action of actinic ray or radiation, (B) a polymer contg. II (R11, R12 = H, CN, halo alkyl; Z = atoms forming alicyclic group contg. C-C bond) and .gtoreq.1 of CH(COXAR1)CH(COXAR2) [R1, R2 = H, CN, OH, CO2H, CO2R5, CONHR6, CONHSO2R6; alkyl, alkoxy, cyclic hydrocarbon, Q1-2; (R21-R30 = H, alkyl; a,b = 1, 2); R5 = alkyl, cyclic hydrocarbon. Q1-2; R6 = alkyl, cyclic hydrocarbon; X = O, S, NH, NHSO2, NHSO2NH; A = bond, divalent linkage] and III (Z2 = O, NR3; R3 = H, OH, OSO2R4; R4 = alkyl, haloalkyl, cycloalkyl, camphor residue) as repeating units and having an acid decomposable group, and (C) F- and/or Si-type surfactant. The **compn.** is useful for microphoto fabrication, shows high sensitivity to far UV and ArF excimer laser, and development defect is prevented.

ST **photoresist** acid **generator** sulfonium compd; tetracyclododecene maleic anhydride polymer acid decomposable; **surfactant fluoro** silicon **photoresist**

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341; pos-working **photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, and **surfactant**)

IT Positive **photoresists**
Surfactants
(pos-working **photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, and **surfactant**)

IT 341548-88-7DP, derivs.
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dissoln. inhibitor; pos-working **photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, and **surfactant**)

IT 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos-working **photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, and **surfactant**)

IT 144317-44-2P, Triphenylsulfonium perfluorobutanesulfonate 301525-10-0P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos-working **photoresist compn.** contg. sulfonium compd. acid generator, acid-decomposable polymer, and

surfactant)

IT 144089-15-6 144089-16-7 144116-10-9 188626-47-3 210040-28-1
242143-69-7 242143-71-1 301525-13-3 301525-15-5 301525-19-9
312386-49-5 312386-66-6 341979-02-0 341979-04-2 341979-06-4
RL: TEM (Technical or engineered material use); USES (Uses)
(pos-working **photoresist compn**. contg. sulfonium compd. acid generator, acid-decomposable polymer, and **surfactant**)

IT 301525-09-7P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of)

IT 3744-08-9P, Triphenylsulfonium iodide
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of sulfonium compd. acid generator)

IT 71-43-2, Benzene, reactions 375-73-5, Perfluorobutane sulfonic acid 945-51-7, Diphenylsulfoxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of sulfonium compd. acid generator)

IT 93940-09-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with cyclopentadiene)

IT 542-92-7, Cyclopentadiene, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with oxodimethylbutanol methacrylate)

L38 ANSWER 52 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:356499 HCAPLUS
DN 134:374094
TI Heat-developable photographic material having protective layer with controlled water contact angle
IN Matsumura, Tomoyuki
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 58 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03C001-498
ICS G03C001-498; G03C001-76
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 42
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001133923	A2	20010518	JP 1999-312290	19991102
PRAI	JP 1999-312290		19991102		

OS MARPAT 134:374094
AB The material comprises a transparent support having thereon (A) a photosensitive layer contg. an org. Ag salt, a photosensitive Ag halide, a reducing agent, and a contrast-increasing agent and (B) a protective layer whose water contact angle is .gtoreq.60.degree.. Influence of change of environmental conditions on the sensitivity and line width of the material is reduced.
ST heat developable photog material protective layer; water contact angle protective layer photog; sensitivity retention heat developable photog material; hydrophilic coating heat developable photog material

IT Photothermographic copying
(heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT Coating materials
(hydrophilic coatings; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT Latex
(in coating; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT Surfactants
(nonionic, in coating; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT 9004-35-7, Cellulose acetate
RL: TEM (Technical or engineered material use); USES (Uses)
(CA-REF, coating; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT 9004-36-8, CAB 381 20 9004-39-1, CAP 482 0.5
RL: TEM (Technical or engineered material use); USES (Uses)
(coating; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT 313989-82-1 313989-84-3 318236-24-7 339531-73-6
RL: TEM (Technical or engineered material use); USES (Uses)
(contrast-increasing agent; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT 52757-51-4, 2-Ethylhexyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate-styrene copolymer
RL: MOA (Modifier or additive use); USES (Uses)
(latex in coating; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT **251907-30-9**, KH 40
RL: NUU (Other use, unclassified); USES (Uses)
(surfactant in coating; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT 96231-87-7, S 381
RL: NUU (Other use, unclassified); USES (Uses)
(surfactant in coatings; heat-developable photog. material having surface-protective layer with regulated water contact angle)
IT **251907-30-9**, KH 40
RL: NUU (Other use, unclassified); USES (Uses)
(surfactant in coating; heat-developable photog. material having surface-protective layer with regulated water contact angle)
RN 251907-30-9 HCAPLUS
CN Surflon KH 40 (9CI) (CA INDEX NAME)
*** SUBSTANCE INFORMATION NOT AVAILABLE ***

L38 ANSWER 53 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:336589 HCAPLUS
DN 134:346468
TI **Photoresist composition** containing **fluorosurfactant**
IN Hatakeyama, Jun
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-004; C08G065-00; C08K005-00; C08L071-00; C08L101-00;

H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001125259	A2	20010511	JP 1999-308497	19991029
PRAI	JP 1999-308497		19991029		

AB The photoresist **compn.** contains a **surfactant** having perfluoroalkyl ether as a hydrophobic group. Microbubble generation is prevented and the **compn.** shows good storage stability and is suited for spin coating.

ST photoresist perfluoroalkyl ether **surfactant**

IT **Surfactants**
(**fluorosurfactants; photoresist compn.** contg. perfluoroalkyl ether **surfactant**)

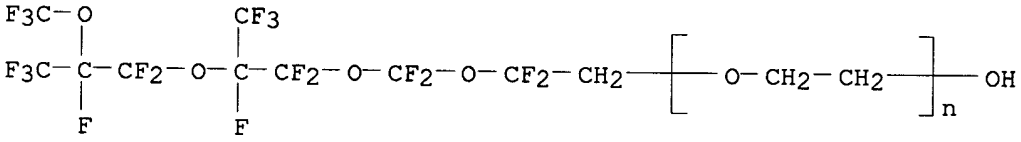
IT **Photoresists**
(photoresist **compn.** contg. perfluoroalkyl ether **surfactant**)

IT **337955-47-2 337955-48-3 337955-49-4 337955-50-7**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**photoresist compn.** contg. perfluoroalkyl ether **surfactant**)

IT **337955-47-2 337955-48-3 337955-49-4 337955-50-7**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**photoresist compn.** contg. perfluoroalkyl ether **surfactant**)

RN 337955-47-2 HCAPLUS

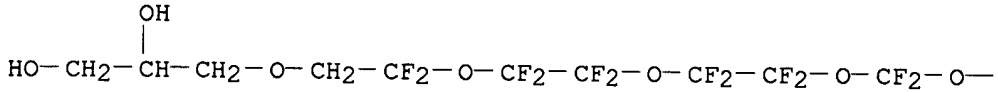
CN Poly(oxy-1,2-ethanediyl), .alpha.-[2,2,4,4,6,6,7,9,9,10,12,12,12-tridecafluoro-7,10-bis(trifluoromethyl)-3,5,8,11-tetraoxadodec-1-yl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



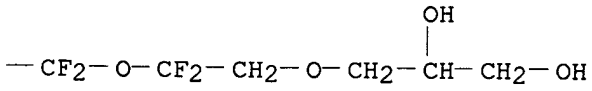
RN 337955-48-3 HCAPLUS

CN 4,7,9,11,14,17,20-Heptaoxatricosane-1,2,22,23-tetrol, 6,6,8,8,10,10,12,12,13,13,15,15,16,16,18,18-hexadecafluoro- (9CI) (CA INDEX NAME)

PAGE 1-A

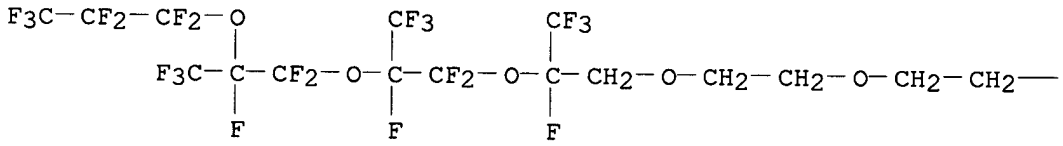


PAGE 1-B

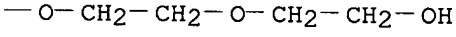


RN 337955-49-4 HCAPLUS
CN 3,6,9,12,15,18,21-Heptaoxatetracosan-1-ol, 14,16,16,17,19,19,20,22,22,23,23,24,24,24-tetradecafluoro-14,17,20-tris(trifluoromethyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

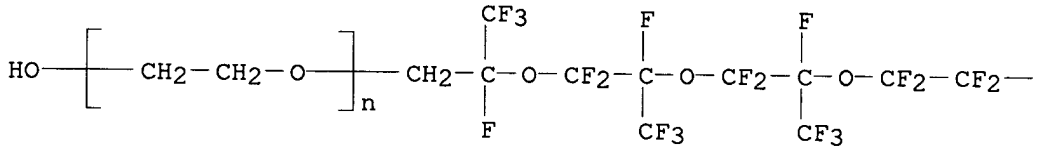


PAGE 1-B

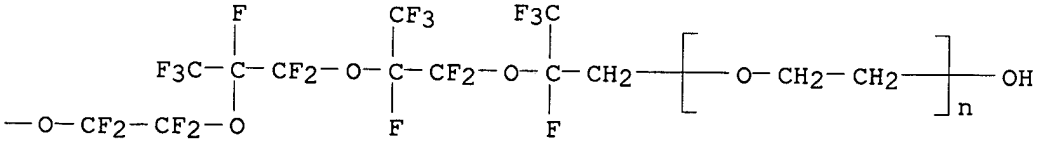


RN 337955-50-7 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[2,4,4,5,7,7,8,10,10,11,11,13,13,14,14,16,17,17,19,20,20,22-docosafluoro-2,5,8,16,19,22-hexakis(trifluoromethyl)-3,6,9,12,15,18,21-heptaoxatricosane-1,23-diyl]bis[.omega.-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L38 ANSWER 54 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:319605 HCAPLUS
DN 134:334291
TI Positive-working **photoresist composition**
IN Sato, Kenichiro; Mizutani, Kazuyoshi; Yasunami, Shoichiro
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 80 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G03F007-075
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1096319	A1	20010502	EP 2000-123359	20001030
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001194794	A2	20010719	JP 2000-328968	20001027
	JP 2001201857	A2	20010727	JP 2000-329053	20001027
PRAI	JP 1999-309587	A	19991029		
	JP 1999-319837	A	19991110		

AB The invention relates to a pos.-working **photoresist compn.** for use in the prodn. of semiconductor integrated circuit element, mask for the prodn. of integrated circuit, printed wiring board, liq. crystal panel, etc. The **photoresist compn.** comprises (a) a resin comprising the specific repeating structural units which resin increases in its soly. in an alk. developer when acted upon by an acid, (b') an onium salt compd. which generates an acid when irradiated with active ray or radiation and (c) .gtoreq.1 of F-based and/or Si-based surface active agent and nonionic surface active agent or a pos.-working **photoresist compn.** comprises (a) a resin comprising the specific repeating structural units which resin increases in its soly. in an alk. developer when acted upon by an acid, (b) a compd. which generates an acid when irradiated with active ray or radiation, and (d) a mixed solvent contg. .gtoreq.1 propylene glycol monoalkyl ether carboxylate and .gtoreq.1 of solvents selected from the group consisting of propylene glycol monoalkyl ether, alkyl lactate and alkoxyalkyl propionate and solvents selected from the group consisting of .gamma.-butyrolactone, ethylene carbonate and propylene carbonate.

ST pos working **photoresist** maleic anhydride polymer **photoacid generator** surfactant; iodonium sulfonium fluoride silane solvent UV **photoresist** integrated circuit

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); NUU (Other use, unclassified); USES (Uses)
(KP 341; **surfactant** for **photoresist compn**. used in manuf. of semiconductor integrated circuit element)

IT Positive **photoresists**
Surfactants
(**photoresist compn.** used in manuf. of semiconductor integrated circuit element)

IT Fluoropolymers, uses
Onium compounds
Polymers, uses

RL: MOA (Modifier or additive use); NUU (Other use, unclassified); USES (Uses)
(**photoresist compn**. used in manuf. of semiconductor integrated circuit element)

IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine
RL: MOA (Modifier or additive use); NUU (Other use, unclassified); USES (Uses)
(org. base for **photoresist compn**. used in manuf. of semiconductor integrated circuit element)

IT 336612-42-1, FHi 028D
RL: DEV (Device component use); NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(**photoresist**; synthesis of resin having high soly. in alk. developer for **photoresist compn**. used in manuf. of semiconductor integrated circuit element)

IT 96-48-0, .gamma.-Butyrolactone 96-49-1, Ethylene carbonate 97-64-3, Ethyl lactate 108-32-7, Propylene carbonate 108-94-1, Cyclohexanone, uses 1320-67-8, Propylene glycol monomethyl ether 14272-48-1 84540-57-8, Propylene glycol monomethyl ether acetate 98516-33-7, Propylene glycol monomethyl ether propionate
RL: MOA (Modifier or additive use); NUU (Other use, unclassified); USES (Uses)
(solvent for **photoresist compn**. used in manuf. of semiconductor integrated circuit element)

IT 9016-45-9, Polyethylene glycol nonylphenyl ether 137462-24-9, MEGAFAC F 176 216679-67-3, MEGAFAC R 08
RL: MOA (Modifier or additive use); NUU (Other use, unclassified); USES (Uses)
(**surfactant** for **photoresist compn**. used in manuf. of semiconductor integrated circuit element)

IT 213740-80-8P 220122-68-9P 258341-96-7P 258341-97-8P 258341-99-0P 279218-73-4P 279218-74-5P 336609-08-6P
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(synthesis of **photoacid generator** for pos.-working **photoresist compn**. used in manuf. of semiconductor integrated circuit element)

IT 336609-09-7P 336609-10-0P 336609-12-2P 336609-14-4P 336609-15-5P 336609-16-6P 336609-17-7P 336609-18-8P 336609-20-2P 336609-21-3P 336609-23-5P 336609-24-6P 336609-25-7P 336609-26-8P 336609-27-9P 336609-28-0P 336609-29-1P 336609-30-4P 336609-31-5P, Maleic anhydride-tert-butyl acrylate-allyltrimethylsilane copolymer
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(synthesis of resin having high soly. in alk. developer for **photoresist compn**. used in manuf. of semiconductor integrated circuit element)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Crivello, J; US 5346803 A 1994 HCAPLUS
(2) Crivello, J; JOURNAL OF POLYMER SCIENCE, PART A: POLYMER CHEMISTRY 1995, V33(3), P513 HCAPLUS
(3) Fuiji Photo Film Co Ltd; EP 0952489 A 1999 HCAPLUS
(4) Olin Microelectronic Chemical Inc; WO 9942903 A 1999 HCAPLUS
(5) Siemens Aktiengesellschaft; EP 0919867 A 1999 HCAPLUS

L38 ANSWER 55 OF 77 HCAPLUS COPYRIGHT 2003 ACS

AN 2001:299130 HCAPLUS
DN 134:318692
TI Positive **photoresist compositions** providing line patterns with excellent edge sharpness
IN Mizutani, Kazuyoshi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 35 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; G03F007-075; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001117233	A2	20010427	JP 1999-298605	19991020
PRAI	JP 1999-298605		19991020		

AB The **compns.** comprise (A) acid-decomposable polymers comprising (i) [CH2C[(CH2)nSiR1R2R3]H] [R1-3 = (halo)alkyl, halo, alkoxy, trialkylsilyl(oxy); n = 0, 1] and (ii) [CH2CY(LCO2Q)] [Y = H, Me, cyano, Cl; L = single bond, bivalent linkage; Q = H, acid-decomposable groups] and/or [CH(COX2L2A2)CH(COX1L1A1)] [X1, X2 = O, S, NH, NHSO2; L1, L2 = single bond, bivalent linkage; A1 = Q, CO2Q; A2 = H, cyano, OH, CO2H, CO2R', CONHR", alkyl(oxy), cyclic hydrocarbyl, CO2Q (R', R" = alkyl)], (B) **photoacid generators**, (C) org. solvents, (D) basic org. compds., (E) F- and/or Si-bearing surfactants and/or nonionic surfactants. The **photoacid generators** may **generate** org. sulfonic acids upon irradn.

ST acid decomposable acrylic polymer pos **photoresist**; methylallylsilane maleic anhydride polymer **photoresist** sensitivity; edge sharpness pos **photoresist** acid decomposable; sulfonic acid forming **photoacid generator** **photoresist**

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(KP 341, **surfactants**; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT Diazo compounds
RL: CAT (Catalyst use); USES (Uses)
(di- or ketosulfones, **photoacid generators**; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT Sulfones
RL: CAT (Catalyst use); USES (Uses)
(disulfones, **photoacid generators**; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT Sulfonates
RL: CAT (Catalyst use); USES (Uses)
(iminosulfonates, **photoacid generators**; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT Onium compounds
RL: CAT (Catalyst use); USES (Uses)

(iodonium, sulfonates, **photoacid generators**; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT **Surfactants**
(nonionic; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT Positive **photoresists**
Surfactants
(pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT Sulfonic acids, uses
RL: CAT (Catalyst use); FMU (Formation, unclassified); FORM (Formation, nonpreparative); USES (Uses)
(pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT Sulfonium compounds
RL: CAT (Catalyst use); USES (Uses)
(sulfonates, **photoacid generators**; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT 57835-99-1, Triphenylsulfonium hexafluorophosphate 153698-46-5 197447-16-8 287925-54-6, Bis(p-tert-amylphenyl)iodonium tosylate
RL: CAT (Catalyst use); USES (Uses)
(**photoacid generators**; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 6674-22-2, DBU
RL: CAT (Catalyst use); USES (Uses)
(pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT 335427-33-3P 335427-34-4P 335427-35-5P 335430-18-7P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

IT 9016-45-9, Polyethylene glycol nonyl phenyl ether 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactants**; pos. **photoresists** contg. organosilyl-bearing polymers and showing good edge sharpness of line patterns)

L38 ANSWER 56 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:133866 HCAPLUS
DN 134:186006
TI Photothermographic material containing metal alkoxide and inorganic or organic particles
IN Morita, Kiyokazu
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 34 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03C001-498
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001051374	A2	20010223	JP 1999-223619	19990806
PRAI	JP 1999-223619		19990806		

AB The material comprises .gtoreq.1 image forming layer contg. org. Ag salt particles, photosensitive Ag halide grains, and .gtoreq.1 kind of reducing agent on one side of a support, .gtoreq.1 of which contains (1) a metal alkoxide and (a) inorg. or org. particles or (b) a fluorine surfactant, or (2) a binder and a fluorine compd. with a group reacting with the binder. It showed improved antistatic capability, running properties, preventing image contamination and abrasive defects.

ST photothermog material metal alkoxide; inorg org particle photothermog material; fluorosurfactant binder photothermog material

IT Surfactants
(fluorosurfactants; photothermog. material contg. metal alkoxide and fluorosurfactant)

IT Photothermographic copying
(photothermog. material contg. metal alkoxide and inorg. or org. particles)

IT 7631-86-9, Sunsphere H 121, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(Sunsphere H 121, Sylysia 440; photothermog. material contg. metal alkoxide and inorg. or org. particles)

IT 104559-01-5, Desmodur N 3300
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(hardener; photothermog. material contg. metal alkoxide and inorg. or org. particles)

IT 96231-87-7, Surflon S 381 122303-48-4, Eftop EF 105 184827-05-2 **251907-30-9**, KH 40 326891-90-1, F 120K
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(photothermog. material contg. metal alkoxide and fluorosurfactant)

IT 555-31-7, Aluminum triisopropoxide 1992-48-9, Silicon tetraisopropoxide 5593-70-4, Titanium tetrabutoxide 9011-14-7, MX 300 113041-89-7, Super Pflex 200 127175-49-9, MF 160
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(photothermog. material contg. metal alkoxide and inorg. or org. particles)

IT **251907-30-9**, KH 40
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(photothermog. material contg. metal alkoxide and fluorosurfactant)

RN 251907-30-9 HCAPLUS

CN Surflon KH 40 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L38 ANSWER 57 OF 77 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:863755 HCAPLUS

DN 134:35041

TI Positive-working **photoresist composition** based on **photosensitive** acid **generators** for far ultraviolet ray exposure.

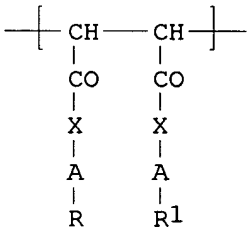
IN Sato, Kenichiro; Adegawa, Yutaka; Aogo, Toshiaki

PA Fuji Photo Film Co., Ltd., Japan

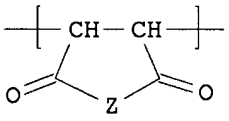
SO Jpn. Kokai Tokkyo Koho, 52 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000338672	A2	20001208	JP 1999-145223	19990525
PRAI JP 1999-145223		19990525		

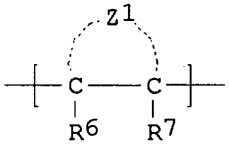
GI



I

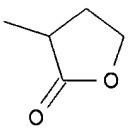


II

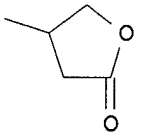


III

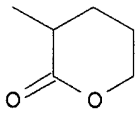
Q=



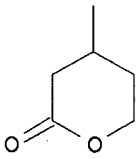
Q1=



Q2=



Q3=



AB Pos.-working **photoresist compns.** contain a copolymer having functional group which decomps. by action of an acid, a silicone or **fluorine** compd. type **surfactant,** a **photosensitive** acid **generator,** a nd optionally a N-contg. basic compd. The copolymer has repeating units of the formulas I (R, R1 = H, CN, OH, CO2H, CO2R2, CONHR3, CONHSO2R3, alkyl, alkoxy, cyclic hydrocarbon moiety, Q, Q1, Q2, Q3; Q-Q3 may be substituted with alkyl groups; X = O, S, NH, NHSO2, NHSO2NH; A = bond, divalent org. group; R2 = alkyl, cyclic hydrocarbon moiety, Q, Q1, Q2, Q3; R3 = alkyl, cyclic hydrocarbon moiety) or II (Z = O, NR4; R4 = H, OH, OSO2R5; R5 = alkyl, haloalkyl, cycloalkyl, camphor moiety) and III (Z1 = group of atoms required to complete alicyclic ring having at least two C atoms bonded to each other; R6, R7 = H, CN, halo, alkyl). The **resist compn.** show excellent sensitivity to Far UV (170-220nm) good resolving power, good adhesion to substrate, and produces very little scums upon development.

ST **photoresist compn photosensitive** acid **generator** pos working; surfactant additive **photoresist compn**

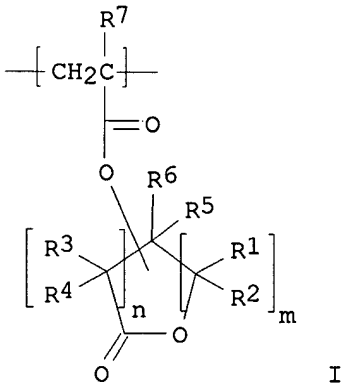
IT **Surfactants**
(**surfactant** additives for **photosensitive** acid

generator type)
IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant**; additive for acid **generator** type pos.-working **photoresist compn.**)
IT Positive **photoresists**
(**surfactants** for **photosensitive** acid **generator** type)
IT 102-82-9, Tri-n-butylamine 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 41556-26-7, Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate
RL: MOA (Modifier or additive use); USES (Uses)
(additive for acid **generator** type pos.-working **photoresist compn.**)
IT 301525-10-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(far UV sensitive pos.-working **photoresist compn.** contg. acid **generator**, **surfactant**, and acid-decomposable polymer)
IT 301525-13-3 301525-15-5 301525-19-9 312386-49-5 312386-66-6
RL: TEM (Technical or engineered material use); USES (Uses)
(far UV sensitive pos.-working **photoresist compn.** contg. acid **generator**, **surfactant**, and acid-decomposable polymer)
IT 66003-78-9, Triphenylsulfonium triflate 312386-77-9
RL: TEM (Technical or engineered material use); USES (Uses)
(**photosensitive** acid **generator** for pos.-working **photoresist compn.**)
IT 137462-24-9, Megafac F176 216679-67-3, Megafac R08
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant**; additive for acid **generator** type pos.-working **photoresist compn.**)

L38 ANSWER 58 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:452613 HCAPLUS
DN 133:96786
TI Positive-working photosensitive **composition** containing lactone methacrylate copolymer
IN Kodama, Kunihiko; Sato, Kenichiro; Aogo, Toshiaki; Kabe, Yasumasa
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000187329	A2	20000704	JP 1998-367619	19981224
PRAI	JP 1998-367619		19981224		

GI



I

AB The title photosensitive **compn.** contains (a) a resin having a repeating unit I (R1-6 = H, alkyl, alkoxy, OH, halo; R7 = H, halo, CN, alkyl, haloalkyl, the ring structure links to the O atom by single bond at 1 of the R1-6 positions, .gtoreq.2 of R1-6 may link each other to form a ring; m, n = 0-2) and groups which are cleaved by the action of acid to increase the soly. to alk. developing solns., (b) a **photoacid generator** which **generates** an acid by irradn. with activating ray or radiation, and (c) a F-type and/or Si-type surfactant. The **compn.** shows high sensitivity toward light of wavelength .ltoreq.250 nm, esp. .ltoreq.220 nm and provides high resoln. **resist** patterns with good adhesion to substrate and dry etch **resistance.**

ST **photoresist** lactone methacrylate copolymer; acid **generator photoresist; fluoro** silicon **surfactant photoresist**

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341; **photoresist compn.** contg. alkali-sol. resin, **photoacid generator,** and **surfactant**)

IT Positive **photoresists**
Surfactants
(**photoresist compn.** contg. alkali-sol. resin, **photoacid generator,** and **surfactant**)

IT 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 69458-62-4, Megafac F171 216679-67-3, Megafac R 08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**photoresist compn.** contg. alkali-sol. resin, **photoacid generator,** and **surfactant**)

IT 177080-68-1P, 2-Methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 195000-67-0P, .alpha.-Methacryloyloxy-.gamma.-butyrolactone-2-methyl-2-adamantyl methacrylate copolymer 195000-69-2P 280552-10-5P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresist compn.** contg. alkali-sol. resin, **photoacid generator,** and **surfactant**)

IT 66003-78-9, Triphenylsulfonium triflate

RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist compn.** contg. alkali-sol. resin, **photoacid generator**, and **surfactant**)

L38 ANSWER 59 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:440246 HCAPLUS
DN 133:65984
TI Positive-working photoresist coating solution for manufacture of liquid crystal device and substrate using same
IN Kato, Tetsuya; Koshiyama, Jun
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-022
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000181055	A2	20000630	JP 1998-358912	19981217
	TW 473650	B	20020121	TW 1999-88120090	19991117
PRAI	JP 1998-358912	A	19981217		

AB The title photoresist coating soln. contains an alkali-sol. resin, a quinonediazide group-contg. compd., and a nonionic F/Si-type surfactant in which the F and Si contents are 10-25 and 3-10 wt.%, resp., which are dissolved in an org. solvent. The substrate comprises a resist coating formed by coating and drying the soln. on a square glass substrate. A photoresist coating without striation, uneven drying, and trace formed upon dropping the soln. can be formed from the soln.
ST photoresist fluoro silicon surfactant; quinonediazide photoresist liq crystal display
IT Surfactants
(**fluorosurfactants**, siloxane; **photoresist compn.** contg. alkali-sol. resin, quinonediazide compd., and fluoro-silicon surfactant for manuf. of liq. crystal display)
IT Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(novolak; photoresist **compn.** contg. alkali-sol. resin, quinonediazide compd., and fluoro-silicon surfactant for manuf. of liq. crystal display)
IT Liquid crystal displays
Positive **photoresists**
(photoresist **compn.** contg. alkali-sol. resin, quinonediazide compd., and fluoro-silicon surfactant for manuf. of liq. crystal display)
IT 165967-96-4, X-70-093
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(photoresist **compn.** contg. alkali-sol. resin, quinonediazide compd., and fluoro-silicon surfactant for manuf. of liq. crystal display)
IT 123-86-4, Butyl acetate
RL: NUU (Other use, unclassified); USES (Uses)
(photoresist **compn.** contg. alkali-sol. resin, quinonediazide compd., and fluoro-silicon surfactant for manuf. of liq. crystal

display)

IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 107761-81-9, 2,3,4,4'-Tetrahydroxy benzophenone naphthoquinone-1,2-diazido-5-sulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist **compn.** contg. alkali-sol. resin, quinonediazide compd., and fluoro-silicon surfactant for manuf. of liq. crystal display)

IT 97-64-3, Ethyl lactate 84540-57-8, Propylene glycol monomethyl ether acetate
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; photoresist **compn.** contg. alkali-sol. resin, quinonediazide compd., and fluoro-silicon surfactant for manuf. of liq. crystal display)

L38 ANSWER 60 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:399006 HCAPLUS
DN 133:51206
TI **Resist** material and pattern formation using same
IN Watanabe, Satoshi; Sakurada, Toyohisa; Yanagi, Yoshitaka; Nagura, Shigehiro; Ishihara, Toshinobu
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-00; G03F007-038; G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38

applicants

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000162768	A2	20000616	JP 1999-255113	19990909
PRAI	JP 1998-267855	A	19980922		

OS MARPAT 133:51206

AB The title **resist** material contains a **F**-type **surfactant** which decreases the **contact angle** of the interface between the surface of the material coated on a substrate and either water or alk. developing solns. with increasing the content. The material is coated on a substrate, heat-treated, exposed through a photomask to high energy ray of wavelength .ltoreq.500 nm, x-ray or electron beam, and developed with a developing soln. after heat treatment, if necessary, to form a pattern. The material shows improved coatability and storage stability and provides a coating with good uniformity in thickness and wettability to alk. developing solns.

ST radiation **resist fluorosurfactant**

IT **Surfactants**
(**fluorosurfactants**; radiation-sensitive **resist compn.** contg. **fluorosurfactant**)

IT **Resists**
(radiation-sensitive; radiation-sensitive **resist compn.** contg. **fluorosurfactant**)

IT **251907-30-9**, KH 40 **275364-62-0**, KH 20 (**surfactant**) **275364-64-2**, KH 30 (**surfactant**)
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(radiation-sensitive **resist compn.** contg.

fluorosurfactant)
IT **251907-30-9**, KH 40 **275364-62-0**, KH 20 (**surfactant**) **275364-64-2**, KH 30 (**surfactant**)
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(radiation-sensitive **resist compn.** contg. **fluorosurfactant**)
RN 251907-30-9 HCAPLUS
CN Surflon KH 40 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 275364-62-0 HCAPLUS
CN KH 20 (surfactant) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 275364-64-2 HCAPLUS
CN KH 30 (surfactant) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L38 ANSWER 61 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:67678 HCAPLUS
DN 132:130026
TI Positive-working resist **composition** suited for use in deep UV ray exposure
IN Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000029219	A2	20000128	JP 1998-197730	19980713
PRAI	JP 1998-197730		19980713		

AB The title resist **compn.** contains (a) a compd. generating an acid upon activating ray or radiation irradn., (b) a resin having polycyclic alicyclic groups and CO2H groups, (c) a compd. having .gtoreq.2 groups CR1R2C:CR3Z [R1-3 = H, (substituted) alkyl, (substituted) cycloalkyl, 2 of R13 may link each other to form a ring structure comprising 3-8 C atoms and heteroatoms; Z = O, S, SO2, NH], (d) a cyclic aliph. org. carboxylic acid with mol. wt. .ltoreq.1000 and/or a naphthalene ring-contg. org. carboxylic acid, (e) a N-contg. basic compd., and (f) a F-type and/or Si-type surfactant. The **compn.** shows improved developability and provides a resoln. pattern with high residual film rate and good profile using deep UV rays, esp., ArF excimer lasers.
ST UV resist alicyclic polymer carboxy group; enol ether compd UV resist; cyclic carboxylic acid UV resist; nitrogen basic compd resist; fluoro silicone surfactant resist
IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(KP 341; deep UV-sensitive pos. resist **compn.**)
IT **Photoresists**
(UV; deep UV-sensitive pos. resist **compn.**)
IT Surfactants
(**fluorosurfactants**; deep UV-sensitive pos. **resist compn.**)
IT 66003-78-9, Triphenylsulfonium triflate
RL: TEM (Technical or engineered material use); USES (Uses)
(acid generator; deep UV-sensitive pos. resist **compn.**)
IT 211566-71-1P 216308-37-1P 216308-40-6P 216308-41-7P 216308-42-8P
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)
IT 86-55-5, 1-Naphthalenecarboxylic acid 100-97-0, Hexamethylenetetramine, uses 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 828-51-3, 1-Adamantanecarboxylic acid 1076-97-7, 1,4-Cyclohexanedicarboxylic acid 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene 137462-24-9, Megafac F176 193024-52-1, Rikacid HBH 216308-35-9 216308-38-2 216308-43-9 216679-67-3, Megafac R08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)
IT 170969-48-9P, tert-Butyl methacrylate-methacrylic acid-tricyclo decanyl methacrylate copolymer 181531-12-4P 188023-55-4P, 1-Adamantyl methacrylate-methacrylic acid copolymer 194991-29-2P 195044-30-5P 199105-60-7P, Methacrylic acid-tricyclo decanyl methacrylate copolymer 216308-45-1P 216308-48-4P 216308-51-9P 216308-53-1P 216308-54-2P 216308-55-3P 256346-98-2P 256346-99-3P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)
IT 80-04-6, 2,2-Bis(4-hydroxycyclohexyl)propane 110-75-8, 2-Chloroethylvinyl ether 764-48-7, 2-Hydroxyethyl vinyl ether 3813-52-3, 5-Norbornene-2,3-dicarboxylic acid 4098-71-9, Isophorone diisocyanate 4271-48-1, 2-Hydroxyethyl vinyl sulfone 5001-18-3, 1,3-Dihydroxyadamantane 26160-83-8, Bis(hydroxymethyl)tricyclo[5.2.1.02,6]decane
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of enol ether compd.)

L38 ANSWER 62 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:67677 HCAPLUS
DN 132:130025
TI Positive-working resist **composition** suited for use in deep ultraviolet ray exposure
IN Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000029218	A2	20000128	JP 1998-197729	19980713
PRAI	JP 1998-197729		19980713		

AB The title resist **compn.** contains (a) a compd. generating an acid upon activating ray or radiation irradn., (b) a resin having polycyclic alicyclic groups and CO2H groups, (c) a compd. having .gtoreq.2 groups CR1R2C:CR3Z [R1-3 = H, (substituted) alkyl, (substituted) cycloalkyl, 2 of R13 may link each other to form a ring structure comprising 3-8 C atoms and heteroatoms; Z = O, S, SO2, NH], (d) a N-contg. basic compd., and (e) a F-type and/or Si-type surfactant. The **compn.** shows improved developability and provides a pattern with high residual film rate and good profile using deep UV rays, esp., ArF excimer lasers.

ST pos resist alicyclic polymer carboxy group; enol ether compd UV resist; surfactant fluoro silicone resist; nitrogen basic compd resist

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP-341; deep UV-sensitive pos. resist **compn.**)

IT **Photoresists**
(UV; deep UV-sensitive pos. resist **compn.**)

IT Surfactants
(**fluorosurfactants**; deep UV-sensitive pos. **resist compn.**)

IT 66003-78-9, Triphenylsulfonium triflate
RL: TEM (Technical or engineered material use); USES (Uses)
(acid generator; deep UV-sensitive pos. resist **compn.**)

IT 211566-71-1P 216308-37-1P 216308-40-6P 216308-41-7P 216308-42-8P
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)

IT 100-97-0, Hexamethylenetetramine, uses 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene 137462-24-9, Megafac F176 216308-35-9 216308-38-2 216308-43-9 216679-67-3, Megafac R08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)

IT 170969-48-9P, tert-Butyl methacrylate-methacrylic acid-tricyclo decanyl methacrylate copolymer 181531-12-4P 188023-55-4P, 1-Adamantyl methacrylate-methacrylic acid copolymer 194991-29-2P 195044-30-5P 199105-60-7P, Methacrylic acid-tricyclodecanyl methacrylate copolymer 216308-45-1P 216308-48-4P 216308-51-9P 216308-53-1P 216308-54-2P 216308-55-3P 256346-98-2P 256346-99-3P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)

IT 80-04-6, 2,2-Bis(4-hydroxycyclohexyl)propane 110-75-8, 2-Chloroethylvinyl ether 764-48-7, 2-Hydroxyethyl vinyl ether 3813-52-3, 5-Norbornene-2,3-dicarboxylic acid 4098-71-9, Isophorone diisocyanate 4271-48-1, 2-Hydroxyethyl vinyl sulfone 5001-18-3, 1,3-Dihydroxyadamantane 26160-83-8, Bis(hydroxymethyl)tricyclo[5.2.1.02,6]decane
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of enol ether compd.)

L38 ANSWER 63 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:67675 HCAPLUS

DN 132:130024
TI Positive-working resist **composition** suited for use in deep ultraviolet ray exposure
IN Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000029216	A2	20000128	JP 1998-194566	19980709
PRAI	JP 1998-194566		19980709		

AB The title resist **compn.** contains (a) a compd. generating an acid upon activating ray or radiation irradn., (b) a resin having polycyclic alicyclic groups and CO2H groups, (c) a compd. having .gtoreq.2 groups CR1R2C:CR3Z [R1-3 = H, (substituted) alkyl, (substituted) cycloalkyl, 2 of R1-3 may link each other to form a ring structure comprising 3-8 C atoms and heteroatoms; Z = O, S, SO2, NH], (d) a compd. having a N-contg. basic group and acidic group in its mol., and (e) a F-type and/or Si-type surfactant. The **compn.** shows improved developability and provides a resoln. pattern with high residual film rate and good profile using deep UV rays, esp., ArF excimer lasers.

ST deep UV resist enol ether compd; alicyclic carboxy group polymer resist; basic acidic compd resist; fluoro silicone surfactant resist

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(KP 341; deep UV-sensitive pos. resist **compn.**)

IT **Photoresists**
(UV; deep UV-sensitive pos. resist **compn.**)

IT Surfactants
(**fluorosurfactants**; deep UV-sensitive pos. **resist compn.**)

IT 66003-78-9, Triphenylsulfonium triflate
RL: TEM (Technical or engineered material use); USES (Uses)
(acid generator; deep UV-sensitive pos. resist **compn.**)

IT 211566-71-1P 216308-37-1P 216308-40-6P 216308-41-7P 216308-42-8P
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)

IT 59-67-6, Nicotinic acid, uses 118-46-7, 8-Amino-2-naphthol 118-92-3, o-Aminobenzoic acid 5959-52-4, 3-Amino-2-naphthoic acid 137462-24-9, Megafac F176 216308-35-9 216308-38-2 216308-43-9 216679-67-3, Megafac R08
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)

IT 170969-48-9P, tert-Butyl methacrylate-methacrylic acid-tricyclo decanyl methacrylate copolymer 181531-12-4P 188023-55-4P, 1-Adamantyl methacrylate-methacrylic acid copolymer 194991-29-2P 195044-30-5P 199105-60-7P, Methacrylic acid-tricyclo decanyl methacrylate copolymer

216308-45-1P 216308-48-4P 216308-51-9P 216308-53-1P 216308-54-2P
216308-55-3P 256346-98-2P 256346-99-3P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(deep UV-sensitive pos. resist **compn.**)

IT 80-04-6, 2,2-Bis(4-hydroxycyclohexyl)propane 110-75-8, 2-Chloroethylvinyl ether 764-48-7, 2-Hydroxyethyl vinyl ether 3813-52-3, 5-Norbornene-2,3-dicarboxylic acid 4098-71-9, Isophorone diisocyanate 4271-48-1, 2-Hydroxyethyl vinyl sulfone 5001-18-3, 1,3-Dihydroxyadamantane 26160-83-8, Bis(hydroxymethyl)tricyclo[5.2.1.02,6]decane
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of enol ether compd.)

L38 ANSWER 64 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:34314 HCAPLUS
DN 132:100452
TI Positively working photosensitive polymer **composition** providing pattern with improved profile
IN Kabe, Yasumasa; Sato, Kenichiro
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-075; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 46, 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000010286	A2	20000114	JP 1998-174889	19980622
PRAI	JP 1998-174889		19980622		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The **compn.** comprises (A) a polymer with a alicyclic skeleton, which shows water soly. when decompd. by an acid, (B) a low-mol. and acid-decomposable compd. having naphthalenyl structure I (Z = alicyclic hydrocarbylene II, III, IV, V, VI; R1 = acid-decomposable group; R2 = H, OH, C1-4 alkyl, alkoxy; n, m = 1, 2) with mol. wt. .ltoreq.3000 and an acid-decomposable group, whose alkali soly. is increased by acid, (C) a **photosensitive** acid-**generating** agent, (D) N-contg. basic compd., and (E) a F- and/or a Si-contg. surfactant. The **compn.** shows improved resolving power to ArF excimer laser exposure and dry etching **resistance** for precise pattern formation.

ST pos working photosensitive polymer **compn;** alicyclic structure polymer acid decomposable; **photosensitive** acid **generating** agent polymer **compn; fluorine** compd **surfactant** pos working **photoresist;** silicon compd surfacetant pos working **photoresist**

IT Etching

(dry, -**resistant**; pos.-working **photoresist** contg. acid-decomposable alicyclic structure polymer for patterning under excimer laser exposure)

IT **Surfactants**
(in pos.-working **photoresist** contg. acid-decomposable alicyclic structure polymer for patterning under excimer laser exposure)

IT Excimer lasers
Positive **photoresists**
Semiconductor device fabrication
(pos.-working **photoresist** contg. acid-decomposable alicyclic structure polymer for patterning under excimer laser exposure)

IT Polyalkenamers
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist** contg. acid-decomposable alicyclic structure polymer for patterning under excimer laser exposure)

IT 66003-78-9, Triphenylsulfonium triflate
RL: CAT (Catalyst use); USES (Uses)
(acid-**generating**; in pos.-working **photoresist** contg. acid-decomposable alicyclic structure polymer for patterning under excimer laser exposure)

IT 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2
RL: MOA (Modifier or additive use); USES (Uses)
(in pos.-working **photoresist** contg. acid-decomposable alicyclic structure polymer for patterning under excimer laser exposure)

IT 110-87-2DP, 3,4-Dihydro-2H-pyran, ether with dicyclopentadiene-naphthaol copolymer 5292-43-3DP, tert-Butyl bromoacetate, ether with dicyclopentadiene-naphthaol copolymer 148273-07-8DP, Dicyclopentadiene-.alpha.-naphthol copolymer, ether with tert-Bu bromoacetate 169223-77-2P 170283-35-9P 195143-37-4P 225111-71-7P 254433-04-0P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working **photoresist** contg. acid-decomposable alicyclic structure polymer for patterning under excimer laser exposure)

IT 137462-24-9, Megafac **F** 176 216679-67-3, Megafac R08
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant**; in pos.-working **photoresist** contg. acid-decomposable alicyclic structure polymer for patterning under excimer laser exposure)

L38 ANSWER 65 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:774206 HCAPLUS
DN 132:23501
TI Thermosetting resin compositions for compression molding
IN Kitakawa, Yoshinori
PA Sekisui Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08F290-00
ICS B29C043-02; C08F002-44; C08L067-06
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	JP 11335428	A2	19991207	JP 1998-146144	19980527
PRAI	JP 1998-146144		19980527		

AB Title compns., useful for antisoiling bathtubs, etc., comprise 100 parts mixt. of unsatd. polyesters and vinyl monomers and 0.1-25 parts F-contg. surfactants. Thus, 24% (to total) of RS 480PB549 (chopped strand) was soaked in a mixt. of hydrogenated bisphenol-based unsatd. polyester (40% styrene) 30, isophthalic acid-based unsatd. polyester (40% styrene) 20, ortho-type unsatd. polyester (40% styrene) 20, polystyrene (40% styrene) 30, tert-Bu peroxybenzoate 1.4, NS 100 (CaCO3) 135, SR 1 (powd. TiO2) 6, Kyowamag 150 (MgO) 1.5, and Zn stearate 5 parts, and then treated with 5 parts S 393 (perfluoroalkyl-contg. oligomer) at 40.degree. for 24 h. A stack of 12 sheet molding compds. thereby obtained was compression molded to give a plate showing gloss retention 75.3% after half-year use in a bath room.

ST antisoiling bathtub unsatd polyester fluoro surfactant

IT Perfluoro compounds
Perfluoro compounds
RL: MOA (Modifier or additive use); USES (Uses)
(alcs., ethoxylated; unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT Surfactants
(fluorosurfactants; unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT Reinforced plastics
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(glass fiber-reinforced; unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT Alcohols, uses
Alcohols, uses
RL: MOA (Modifier or additive use); USES (Uses)
(perfluoro, ethoxylated; unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(perfluoroalkyl ethers; unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT Bathtubs
(unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT Polyesters, properties
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(unsatd., styrene-crosslinked; unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT 100-42-5, Styrene, uses
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agents for unsatd. polyesters; unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT 25322-68-3D, Polyethylene glycol, perfluoroalkyl ethers 113189-63-2, Surflon S 393 **251907-30-9**, KH 40 (surfactant)
RL: MOA (Modifier or additive use); USES (Uses)
(unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT 121-91-5D, Isophthalic acid, unsatd. polyesters
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)

IT **251907-30-9**, KH 40 (surfactant)

RL: MOA (Modifier or additive use); USES (Uses)
(unsatd. polyester-fluoro surfactant compns. for antisoiling bathtubs)
RN 251907-30-9 HCAPLUS
CN Surflon KH 40 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L38 ANSWER 66 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:752377 HCAPLUS
DN 132:7565
TI Positive-working photosensitive resin **composition** useful in production of semiconductor devices
IN Kawabe, Yasumasa; Sato, Kenichiro; Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11327145	A2	19991126	JP 1998-132291	19980514
PRAI	JP 1998-132291		19980514		

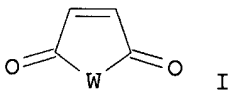
AB The title resin **compn.** contains (a) a cyclic aliph. hydrocarbon skeleton structure-contg. polymer that is decompd. by the action of acid to become alkali-sol., (b) a compd. that generates an acid upon active ray or radiation irradn., (c) a sulfonamide structure-contg. compd. with mol. wt. .ltoreq.1000, (d) a N-contg. basic compd., and (e) a F-type and/or Si-type surfactant. The **compn.** shows improved developability and provides a high resoln. pattern with good profile by using deep UV rays, esp., ArF excimer laser beams and is useful for manuf. of semiconductor devices.
ST photoresist alkali soluble polymer alicyclic hydrocarbon; sulfonamide photoresist; nitrogen basic compd photoresist; surfactant photoresist; semiconductor device photoresist
IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(KP 341; photoresist **compn.** contg. alkali-sol. polymer, acid generator, sulfonamide, basic compd., and surfactant)
IT Surfactants
(**fluorosurfactants; photoresist compn.** contg. alkali-sol. polymer, acid generator, sulfonamide, basic compd., and surfactant)
IT **Photoresists**
(photoresist **compn.** contg. alkali-sol. polymer, acid generator, sulfonamide, basic compd., and surfactant)
IT 122752-67-4, tert-Butyl cholate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(photoresist **compn.** contg. alkali-sol. polymer, acid generator, sulfonamide, basic compd., and surfactant)
IT 100-97-0, uses 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2 18271-17-5 41595-29-3

66003-78-9, Triphenylsulfonium triflate 137462-24-9, Megafac F176
169223-77-2, 1-Adamantyl acrylate-tert-butyl acrylate copolymer
195143-37-4, Acrylic acid-tert-butyl acrylate-maleic anhydride-norbornene copolymer 216679-67-3, Megafac R08 222170-69-6 251294-50-5
251294-52-7 251294-53-8
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist **compn**. contg. alkali-sol. polymer, acid generator, sulfonamide, basic compd., and surfactant)

L38 ANSWER 67 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:752361 HCAPLUS
DN 132:17138
TI Positive photosensitive **compositions** for hard image formation
IN Kawamura, Koichi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-023; G03F007-033
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 46
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11327126	A2	19991126	JP 1998-127705	19980511
PRAI	JP 1998-127705		19980511		

GI



I

AB The **compns**. contain 90% copolymers of (A) fluorinated aliph. group-contg. addn.-polymerizable monomers, (B) CO2H-contg. addn.-polymerizable monomers, and (C) CH2CA(COWR5), CH2CA(OCOR6), CH2:CAU, or I [W = O, NR3; R3 = H, alkyl, aryl; R5 = (un)substituted alkyl or aryl; R6 = alkyl, aryl; U = cyano, aryl, alkoxy, aryloxy, acyloxymethyl, N-contg. heterocyclic group, CH2OCOR6; A = H, halo, alkyl]. The **compns**. are useful for manuf. of lithog. printing plates. The **compns**. give hard images without decrease of sensitivity.
ST fluoropolymer pos photoresist hard image formation; carboxy acrylic fluorpolymer **surfactant** pos photoresist; lipophilic group acrylic fluoropolymer pos photoresist
IT Fluoropolymers, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(acrylic, carboxy-contg.; pos. **photoresists** carboxy-contg. fluoropolymer **surfactants** for hard image formation)
IT **Surfactants**
(**fluorosurfactants**; pos. **photoresists** carboxy-contg. fluoropolymer **surfactants** for hard image formation)

IT Lithographic plates
Positive **photoresists**
(pos. **photoresists** carboxy-contg. fluoropolymer **surfactants** for hard image formation)

IT **251355-97-2P**, 2-Ethylhexyl methacrylate-2-(perfluorooctyl)ethyl acrylate-4-vinylbenzoic acid copolymer **251355-98-3P** 251355-99-4P **251356-00-0P**
RL: DEV (Device component use); IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(pos. **photoresists** carboxy-contg. fluoropolymer **surfactants** for hard image formation)

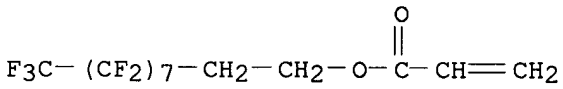
IT **251355-97-2P**, 2-Ethylhexyl methacrylate-2-(perfluorooctyl)ethyl acrylate-4-vinylbenzoic acid copolymer **251355-98-3P** **251356-00-0P**
RL: DEV (Device component use); IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(pos. **photoresists** carboxy-contg. fluoropolymer **surfactants** for hard image formation)

RN 251355-97-2 HCAPLUS

CN Benzoic acid, 4-ethenyl-, polymer with 2-ethylhexyl 2-methyl-2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate (9CI) (CA INDEX NAME)

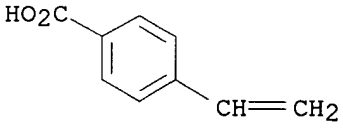
CM 1

CRN 27905-45-9
CMF C13 H7 F17 O2



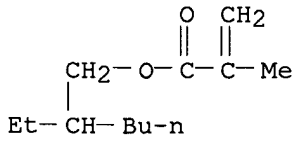
CM 2

CRN 1075-49-6
CMF C9 H8 O2



CM 3

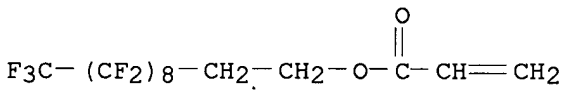
CRN 688-84-6
CMF C12 H22 O2



RN 251355-98-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with ethenylbenzene, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-nonadecafluoroundecyl 2-propenoate and octyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

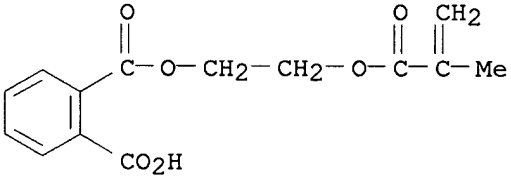
CM 1

CRN 41328-01-2
CMF C14 H7 F19 O2



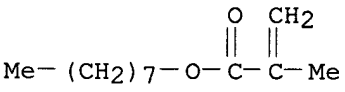
CM 2

CRN 27697-00-3
CMF C14 H14 O6



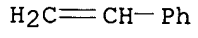
CM 3

CRN 2157-01-9
CMF C12 H22 O2



CM 4

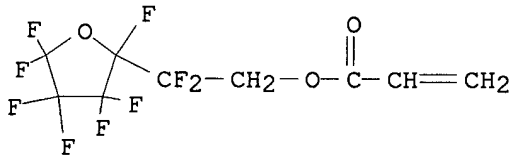
CRN 100-42-5
CMF C8 H8



RN 251356-00-0 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 2,2-difluoro-2-(2,3,3,4,4,5,5-heptafluorotetrahydro-2-furanyl)ethyl 2-propenoate and 4-methylphenyl 2-propenoate (9CI) (CA INDEX NAME)

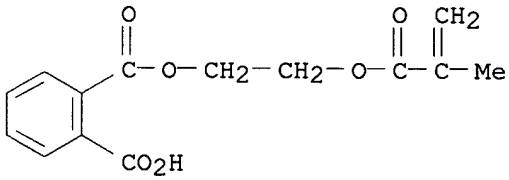
CM 1

CRN 211634-85-4
CMF C9 H5 F9 O3



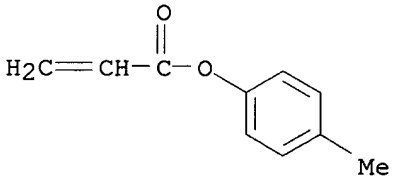
CM 2

CRN 27697-00-3
CMF C14 H14 O6



CM 3

CRN 2374-55-2
CMF C10 H10 O2



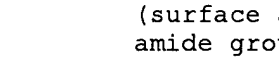
L38 ANSWER 68 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:545230 HCAPLUS
DN 131:191872

TI Surface antireflection coating material for photoresist
IN Miyasawa, Yasuo; Yamaguchi, Tetsuhiko
PA Showa Denko K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-11
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11231545	A2	19990827	JP 1998-31420	19980213
PRAI JP 1998-31420		19980213		

AB The title material contains a water-sol. N-vinylcarboxylic acid amide-type polymer having a repeating structural unit CH2CH(NR1COR2) (R1, R2 = H, Me, Et, Pr, iso-Pr) and a **surfactant** and the **compn.** has a refractive index of 1.2-1.4. The **compn.** is highly sol. in water and applicable to chem. amplified resists and shows low refractive index, high transparency, and improved thermal resistance.
ST photoresists surface antireflection coating vinylacetamide polymer; **surfactant** photoresist antireflection coating material
IT Antireflective films
Photoresists
Surfactants
(surface antireflection coating material contg. vinyl polymer with amide group and **surfactant** for photoresist)
IT **335-67-1**, Perfluorooctanoic acid
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(Eftop EF 201; surface antireflection coating material contg. vinyl polymer with amide group and **surfactant** for **photoresist**)
IT 64-19-7D, Acetic acid, fluorinated, uses **335-99-9**, 1H,1H,7H-Dodecafluoro-1-heptanol 1493-13-6, Trifluoromethanesulfonic acid 2235-54-3, Ammonium laurylsulfate 27176-87-0, Dodecylbenzenesulfonic acid
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(surface antireflection coating material contg. vinyl polymer with amide group and **surfactant** for **photoresist**)
IT 26616-03-5P, Poly(N-vinyl-N-methylacetamide) 28408-65-3P, Poly(N-vinylacetamide)
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(surface antireflection coating material contg. vinyl polymer with amide group and **surfactant** for photoresist)
IT **335-67-1**, Perfluorooctanoic acid
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(Eftop EF 201; surface antireflection coating material contg. vinyl polymer with amide group and **surfactant** for **photoresist**)
RN 335-67-1 HCAPLUS
CN Octanoic acid, pentadecafluoro- (8CI, 9CI) (CA INDEX NAME)

IT **335-99-9**, 1H,1H,7H-Dodecafluoro-1-heptanol
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(surface antireflection coating material contg. vinyl polymer with amide group and **surfactant** for **photoresist**)
RN 335-99-9 HCAPLUS
CN 1-Heptanol, 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L38 ANSWER 69 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:742698 HCAPLUS
DN 129:349064
TI Positive-working photoresist useful in production of semiconductor device
IN Takahara, Masaki
PA Toshiba Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10307385	A2	19981117	JP 1997-118037	19970508
PRAI	JP 1997-118037		19970508		

AB In the title photoresist using a non-Et cellosolve acetate-type solvent in which the solutes and photosensitive materials are dissolved, a F-type surfactant is added to the solvent. The non-Et cellosolve acetate-type solvent may be a 8:2 mixt. of Et lactate and Bu acetate. The photoresist used in a lithog. process for prodn. of semiconductor devices can form a resist film with improved uniformity in thickness on a semiconductor wafer.
ST photoresist fluoro surfactant semiconductor device manuf; butyl acetate solvent photoresist; ethyl lactate solvent photoresist
IT Surfactants
(**fluorosurfactants; photoresist compn.**
contg. fluorine-type surfactant using Et lactate and Bu acetate solvent for manuf. of semiconductor devices)
IT Positive **photoresists**
(photoresist **compn.** contg. fluorine-type surfactant using Et lactate and Bu acetate solvent)
IT Semiconductor devices
(photoresist **compn.** contg. fluorine-type surfactant using Et lactate and Bu acetate solvent for manuf. of semiconductor devices)

IT 97-64-3, Ethyl lactate 123-86-4, Butyl acetate
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; photoresist **compn.** contg. fluorine-type surfactant using Et lactate and Bu acetate solvent for manuf. of semiconductor devices)

L38 ANSWER 70 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1997:84999 HCAPLUS
DN 126:96939
TI Poly(vinylpyrrolidone)-based **composition** for antireflection film and patterning by using it
IN Kasuya, Kei; Hashimoto, Michiaki
PA Hitachi Chemical Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-11; G03F007-38; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08292562	A2	19961105	JP 1995-100854	19950425
PRAI	JP 1995-100854		19950425		

AB The **compn.** contains a poly(vinylpyrrolidone)-based resin, a F-type water-sol. **surfactant**, and a water-sol. F compd.. A pattern is formed by a process including following successive steps; (1) forming a resist film, (2) forming an antireflection film by using the above **compn.**, (3) exposing the pattern, and (4) developing. The antireflection film is easily removed in developing and the resulting pattern improved dimensional stability.
ST polyvinylpyrrolidone antireflection film patterning photoresist; fluorine water sol **surfactant** antireflection film; fluoroethylamine hydrochloric acid salt antireflection film
IT **Photoresists**
Surfactants
(poly(vinylpyrrolidone)-based resin contg. water-sol. fluorine **surfactant** and fluorine compd. as antireflection film in photoresist)
IT 9003-39-8, Poly(vinylpyrrolidone)
RL: TEM (Technical or engineered material use); USES (Uses)
(P 0696; poly(vinylpyrrolidone)-based resin contg. water-sol. fluorine **surfactant** and fluorine compd. as antireflection film in photoresist)
IT 185766-39-6, RG 8018P20
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist; poly(vinylpyrrolidone)-based resin contg. water-sol. fluorine **surfactant** and fluorine compd. as antireflection film in photoresist)
IT 354-28-9 373-88-6, 2,2,2-Trifluoroethylamine hydrochloride **376-73-8**, Hexafluoroglutaric acid
RL: MOA (Modifier or additive use); USES (Uses)
(poly(vinylpyrrolidone)-based resin contg. water-sol. fluorine **surfactant** and fluorine compd. as antireflection film in **photoresist**)
IT 29081-56-9, Fluorad FC 93

RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant**, Fluorad FC 93; poly(vinylpyrrolidone)-based resin contg. water-sol. fluorine **surfactant** and fluorine compd. as antireflection film in photoresist)

IT 1652-63-7, Fluorad FC 135
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant**; poly(vinylpyrrolidone)-based resin contg. water-sol. fluorine **surfactant** and fluorine compd. as antireflection film in photoresist)

IT **376-73-8**, Hexafluoroglutaric acid
RL: MOA (Modifier or additive use); USES (Uses)
(poly(vinylpyrrolidone)-based resin contg. water-sol. fluorine **surfactant** and fluorine compd. as antireflection film in **photoresist**)

RN 376-73-8 HCAPLUS
CN Pentanedioic acid, hexafluoro- (9CI) (CA INDEX NAME)

$HO_2C-(CF_2)_3-CO_2H$

L38 ANSWER 71 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1996:367376 HCAPLUS
DN 125:45140
TI **Photoresist compositions** with improved coatability
IN Nishi, Mineo; Nakano, Koji; Kusumoto, Tadashi
PA Mitsubishi Chem Corp, Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS B01F017-00; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08062834	A2	19960308	JP 1994-196882	19940822
PRAI	JP 1994-196882		19940822		

AB The **photoresist compns.** contain a **F**-type **surfactant** having a surface tension of 15-24.5 dyne/cm at crit. micelle concn. in the **photoresist** solvent. The **compns** . show good coatability and defoaming properties. Thus, m-cresol-p-cresol-2,5-xylenol-HCHO-MeCHO novolak resin and 1,2-naphthoquinone diazido-5-sulfonate of m-cresol-MeCHO condensate were dissolved in a mixt. of Et lactate, propylene glycol monomethyl ether acetate, and Megafac **F**-179 (**surfactant**; surface tension 23.1 dyne/cm) to give a **resist** soln.

ST **Photoresist compn fluorine surfactant**

IT **Surfactants**
(**fluorine**-contg.; **photoresist compn.** contg. **fluorine surfactant**)

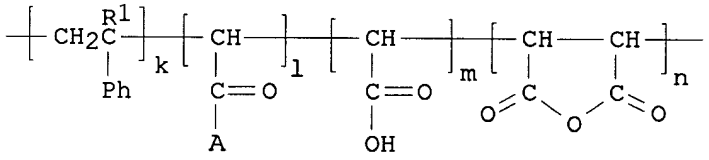
IT **Resists**
(photo-, **photoresist compn.** contg. **fluorine surfactant**)

IT 150769-00-9, Megafac F 179 177765-35-4
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(**photoresist compn.** contg. **fluorine surfactant**)

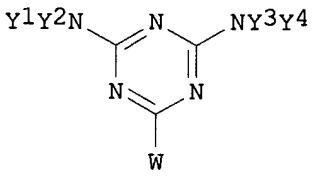
L38 ANSWER 72 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1995:693563 HCAPLUS
DN 123:213210
TI Positive-working thermosetting photosensitive resin **composition**
IN Tsutsumi, Yoshitaka; Tanaka, Tetsuo; Myamura, Hiroyuki; Hasegawa, Masazumi
PA Tosoh Corp, Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-022
ICS G02B001-04; G02B005-20; G03F007-004; G03F007-023
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07104464	A2	19950421	JP 1993-244769	19930930
PRAI JP 1993-244769		19930930		

GI



I



II

AB The **compn.** comprises an alkali-sol. resin, 1,2-naphthoquinonediazidesulfonic acid ester as a photosensitive agent, a thermosetting agent, which improves the heat- and chem.-**resistance** of the resin by heat-treatment after patterning, a solvent, and a **F**-type **surfactant** and/or a mixt. of a silicone-type surfactant and an acrylic oligomer. The alkali-sol. resin may be I (R1 = H, Me; A = OA1, NA2A3; A1-3 = H, C1-6 alkyl, C6-12 aryl, C7-12 (aralkyl; k, m .gtoreq.1; l, n .gtoreq.0)) . The thermosetting agent may be II (W = NY5Y6, Ph; Y1-6 = H, CH2OZ; Z = H, C1-6 alkyl). The **compn.** shows good coatability, high sensitivity and resoln. and gives fine patterns with chem.- and heat-**resistance** after thermosetting.
ST thermosetting pos working **photoresist** surfactant
IT Siloxanes and Silicones, uses
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered

material use); USES (Uses)
(KP 326; pos.-working thermosetting **photoresist compn**
. contg. **surfactant**)
IT Siloxanes and Silicones, uses
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(KP 341; pos.-working thermosetting **photoresist compn**
. contg. **surfactant**)
IT **Surfactants**
(pos.-working thermosetting **photoresist compn.**
contg. **surfactant**)
IT Aminoplasts
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(pos.-working thermosetting **photoresist compn.**
contg. **surfactant**)
IT **Resists**
(photo-, pos.-working thermosetting **photoresist compn**
. contg. **surfactant**)
IT 11114-17-3, Fluorad FC 430 12707-52-7, Fluorad FC 431 134191-63-2, Disparlon L 1983 168041-36-9, Diaaid AD 9001 168041-79-0, Disparlon L 1980
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(pos.-working thermosetting **photoresist compn.**
contg. **surfactant**)
IT 24979-71-3, Maruka Lyncur CMM 62712-10-1, Maleic anhydride-styrene copolymer benzyl ester
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working thermosetting **photoresist compn.**
contg. **surfactant**)
IT 9003-08-1, Formaldehyde-melamine copolymer
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(thermosetting agent Mycoat 506 and Cymel 303; pos.-working thermosetting **photoresist compn.** contg.
surfactant)
IT 150604-81-2, Epolead GT 400
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(thermosetting agent; pos.-working thermosetting **photoresist compn.** contg. **surfactant**)

L38 ANSWER 73 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1995:693137 HCAPLUS
DN 123:97942
TI Radiation sensitive **resist composition.**
IN Inoue, Masaaki; Taira, Kazuo; Yumoto, Yoshiji; Miura, Takao
PA Japan Synthetic Rubber Co., Ltd., Japan
SO Eur. Pat. Appl., 27 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	EP 633499	A1	19950111	EP 1994-304991	19940706
	R: DE, FR, GB, IT, NL				
	JP 07028230	A2	19950131	JP 1993-191838	19930707
PRAI	JP 1993-191838		19930707		

AB A radiation-sensitive **resist compn.** comprises a surface active agent having a perfluoralkenyl group having .gtoreq.6 C atoms in the mol. When the **resist compn.** is filtered through a filter, the surface active agent is not adsorbed by the filter, so that striation is not caused and a coating film having a uniform thickness is always stably obtained from the above **compn.** The **resist compn.** is also excellent in developability.

ST **photoresist compn surfactant**
perfluoro compd

IT **Surfactants**
(**perfluoro** compd. **photoresist compn.**)

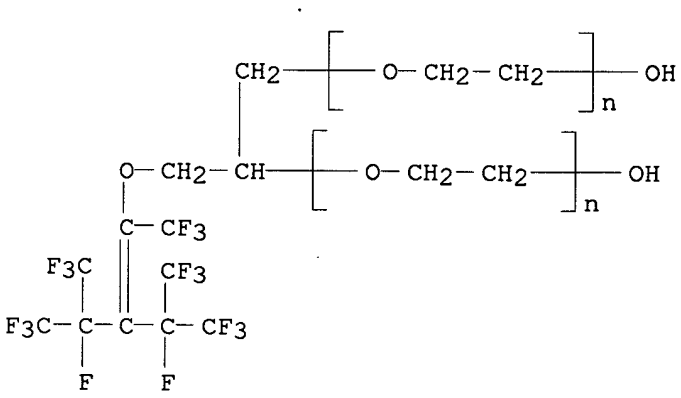
IT **Resists**
(photo-, **perfluoro** compd. as **surfactant**)

IT **165178-74-5 165178-75-6 165178-76-7**
165446-02-6
RL: **MOA (Modifier or additive use)**; USES (Uses)
(**surfactant** for **photoresist compn.**)

IT **165178-74-5 165178-75-6 165178-76-7**
165446-02-6
RL: **MOA (Modifier or additive use)**; USES (Uses)
(**surfactant** for **photoresist compn.**)

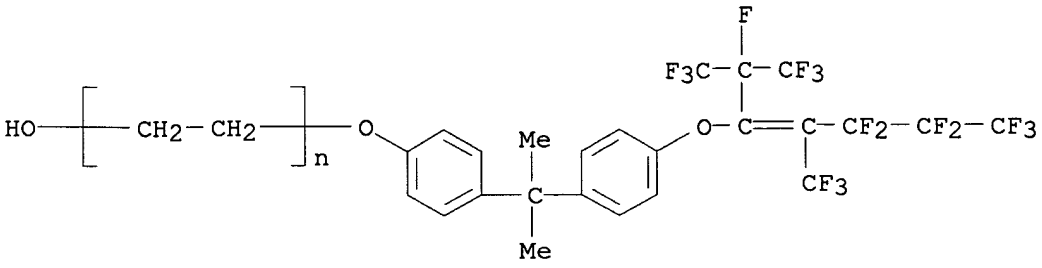
RN 165178-74-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[1-[[[3,4,4,4-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-1,3-bis(trifluoromethyl)-1-butenyl]oxy]methyl]-1,2-ethanediyl]bis[.omega.-hydroxy- (9CI) (CA INDEX NAME)

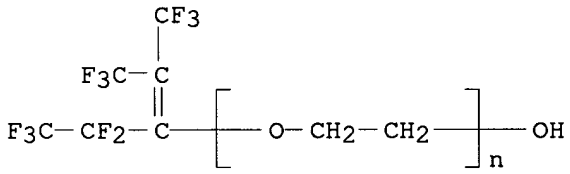


RN 165178-75-6 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[4-[1-[4-[[3,3,4,4,5,5,5-heptafluoro-1-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-2-(trifluoromethyl)-1-pentenyl]oxy]phenyl]-1-methylethyl]phenoxy]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 165178-76-7 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-[3,3,3-trifluoro-1-(pentafluoroethyl)-2-(trifluoromethyl)-1-propenyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 165446-02-6 HCAPLUS
CN Poly[oxy(hydroxy-1,3-propanediyl)], .alpha.-[4-[[4,5,5,5-tetrafluoro-3-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-1,1,2,4,4-pentakis(trifluoromethyl)-2-pentenyl]oxy]benzoyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L38 ANSWER 74 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1994:641848 HCAPLUS
DN 121:241848
TI Liquid **resist compositions** with improved coatability
IN Kanetani, Daisuke; Kodera, Kohei; Iketani, Shinichi
PA Matsushita Electric Works Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-022; H05K003-06
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06186735	A2	19940708	JP 1992-342907	19921222
PRAI JP 1992-342907		19921222		

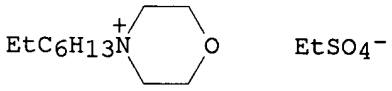
AB The title **resist compns.** contain a **F**-type **surfactant.** A **resist** comprising PR-51767 (cresol-novolak resin), NT-200 (o-naphthoquinonediazidosulfonic acid ester of trihydroxybenzophenone), and FC-431 (fluorinated alkyl ester) showed good coating characteristics for through hole.
ST liq **resist compn fluorine surfactant**

IT **Resists**
Surfactants
(liq. **resist compn. fluorine**-type **surfactant**)
IT 12707-52-7, FC 431 68958-61-2, FC 171 79303-88-1, FC 170C
RL: **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); USES (Uses)
(liq. **resist compn. fluorine**-type **surfactant**)

L38 ANSWER 75 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1988:85329 HCAPLUS
DN 108:85329
TI High-contrast low metal ion two-step photoresist developing process and **composition**
IN Lewis, James Marvin; Blakeney, Andrew Joseph
PA Petrarch Systems, Inc., USA
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G03F007-26
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 231028	A2	19870805	EP 1987-101211	19870129
	EP 231028	A3	19871202		
	EP 231028	B1	19910828		
	R: DE, FR, GB, IT				
	US 4710449	A	19871201	US 1986-823892	19860129
	CA 1306138	A1	19920811	CA 1987-527683	19870120
	JP 62247357	A2	19871028	JP 1987-19599	19870129
PRAI	US 1986-823892		19860129		

GI



I

AB A substrate coated with pos. photoresist is exposed, then immersed in a predip bath, rinsed, and then, immersed in a developer bath, rinsed, and dried. This process provides high contrast which does not decrease over the life of the developer system. The system consists of: (1) a predip soln. contg. an aq. nonmetal ion org. base and a cationic **surfactant** adjusted to a concn. that does not give development; and (2) a developer soln. contg. an aq. soln. of a nonmetal ion org. base and a fluorochem. **surfactant** adjusted to a concn. that provides development. The high contrast is achieved by the cationic **surfactant** coating and resist and inhibiting the attack on the unexposed resist by the developer while permitting the developer to dissolve away the exposed resist. Thus, a photoresist was contacted with an aq. soln. of NMe4OH contg. I, rinsed, and developed in an aq. soln. of NMe4OH contg. CF3(CF2)6CH2CH2O(CH2CH2O)4H. The resist had a sensitivity

of 35 mJ/cm2, a contrast (.gamma.) of 5.2, a film loss of 0%, and a wall angle of 90.degree..

ST photoresist developer **surfactant** cationic; fluoro compd resist developer **surfactant**

IT **Surfactants**
(for photoresist two-step development process)

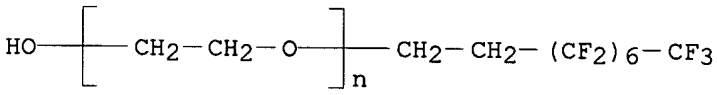
IT **Resists**
(photo-, development of, two-step, cationic **surfactant** and fluoro compd. **surfactant** for)

IT 41572-20-7 **81843-26-7** 96743-36-1 96743-37-2 96743-38-3 112770-82-8 112770-83-9 **112783-27-4** 112783-28-5 112783-29-6 112783-38-7
RL: USES (Uses)
(**surfactants**, for two-step **photoresist** development process)

IT **81843-26-7 112783-27-4**
RL: USES (Uses)
(**surfactants**, for two-step **photoresist** development process)

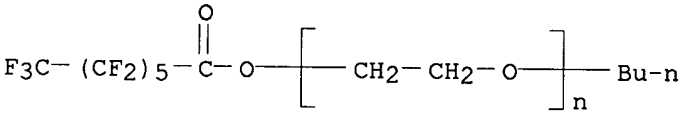
RN 81843-26-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-pentadecafluorononyl)-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 112783-27-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-butyl-.omega.-[(2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoro-1-oxoheptyl)oxy]- (9CI) (CA INDEX NAME)



L38 ANSWER 76 OF 77 HCAPLUS COPYRIGHT 2003 ACS

AN 1985:229491 HCAPLUS

DN 102:229491

TI High contrast photoresist developer

IN Lewis, James Marvin; Owens, Austin; Blakeney, Andrew Joseph

PA Allied Corp., USA

SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW

DT Patent

LA English

IC ICM G03F007-26

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	EP 129106	A1	19841227	EP 1984-106059	19840528
	EP 129106	B1	19880127		
	R: DE, FR, GB, IT				
	CA 1251350	A1	19890321	CA 1984-455255	19840528
	JP 60012547	A2	19850122	JP 1984-125000	19840618
	JP 04062576	B4	19921006		
	US 4661436	A	19870428	US 1985-767318	19850819
PRAI	US 1983-505571		19830617		

<------User Break------>
<------User Break------>
<------User Break------>
<------User Break------>
<------User Break------>
<------User Break------>
<------User Break------>
<------User Break------>
=> D L38 76-77 ALL HITSTR

L38 ANSWER 76 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1985:229491 HCAPLUS
DN 102:229491
TI High contrast photoresist developer
IN Lewis, James Marvin; Owens, Austin; Blakeney, Andrew Joseph
PA Allied Corp., USA
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G03F007-26
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 129106	A1	19841227	EP 1984-106059	19840528
	EP 129106	B1	19880127		
	R: DE, FR, GB, IT				
	CA 1251350	A1	19890321	CA 1984-455255	19840528
	JP 60012547	A2	19850122	JP 1984-125000	19840618
	JP 04062576	B4	19921006		
	US 4661436	A	19870428	US 1985-767318	19850819
PRAI	US 1983-505571		19830617		

AB A developer for a pos. diazo photoresist contains an alkali metal hydroxide, H2O and .gtoreq.0.001% of a nonionic fluorocarbon **surfactants**. Addn. of the **surfactant** results in increased contrast of the developed image. Thus, a Si wafer (dehydrated at 200.degree. and treated with hexamethyldisilazone) was spun coated with a photoresist contg. a novolak resist and diazonaphthoquinonesulfonic acid ester, baked at 100.degree. for 3 min. UV imagewise exposed, immersed in a developer contg. 0.271N aq. KOH, and a mixt. of **surfactants** having formula F(CF2)n(CH2CH2O)mCH2CH2OH (n = 3-6; m > 5-26) 0.016% at 22.degree. for 60 s, and dried. The sensitivity of the resist was 8 mJ/cm2 and contrast 12.5 vs. 25 mJ/cm2 and 2.2 using **surfactants** -free control developer.

ST fluorocarbon **surfactant** diazo **photoresist** developer; pos diazo **photoresist surfactant** developer; nonionic **fluorosurfactant photoresist** developer

IT **Resists**

(developer for, consisting of alkali metal hydroxide and nonionic fluorocarbon **surfactant**)

IT Phenolic resins, uses and miscellaneous
RL: USES (Uses)
(photoresist **compn**. contg. diazo compd. and, alk. developer for, contg. nonionic fluorocarbon **surfactant**, for increased image contrast)

IT **Surfactants**
(nonionic, fluorocarbon, photoresist alk. developer **compn**. contg., for improved image contrast)

IT **Resists**
(photo-, pos.-working, diazo, alk. developer for, contg. nonionic fluorocarbon **surfactant**, for improved image contrast)

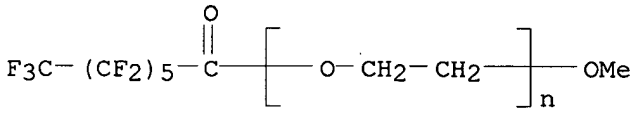
IT 96743-36-1 96743-37-2 96743-38-3 **96743-39-4**
RL: USES (Uses)
(developer **compn**. contg. alkali metal hydroxide and, for pos. diazo **photoresists**, for increased image contrast)

IT 1310-58-3, uses and miscellaneous 1310-73-2, uses and miscellaneous
RL: USES (Uses)
(developer **compn**. contg. nonionic fluorohydrocarbon **surfactant** and, for pos. diazo **photoresists**, for improved image contrast)

IT 20680-48-2D, esters
RL: USES (Uses)
(photoresist contg., developer **compn**. for, contg. alkali metal hydroxide and nonionic fluorocarbon **surfactant**, for improved image contract)

IT **96743-39-4**
RL: USES (Uses)
(developer **compn**. contg. alkali metal hydroxide and, for pos. diazo **photoresists**, for increased image contrast)

RN 96743-39-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoro-1-oxoheptyl)-.omega.-methoxy- (9CI) (CA INDEX NAME)



L38 ANSWER 77 OF 77 HCAPLUS COPYRIGHT 2003 ACS
AN 1985:36768 HCAPLUS
DN 102:36768
TI Resist developer additive for enhanced pattern definition
PA Nippon Telegraph and Telephone Public Corp., Japan; Daikin Kogyo Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC G03C005-24; G03F007-00
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 59142547 A2 19840815 JP 1983-15913 19830202
JP 03032783 B4 19910514
PRAI JP 1983-15913 19830202

AB A resist developer additive comprises an anionic **surfactant** which is F-contg. or other acid, which may or may not be in salt form with ammonium or amininium (primary, secondary or tertiary) in which the substituents are C1-6 alkyls. Claim includes preferable choice of the acids in the claim. The addn. of the claimed agents to the conventional developers markedly increases the definition of the obtained pattern and prevents scum formation. Thus, a resist having a layer of poly(2,2,3,4,4,4-hexafluorobutyl methacrylate) on Si wafer was patternwise exposed to electron beam and developed with methyl isobutyl ketone/iso-PrOH 1:150 mixt. contg. dodecylbenzenesulfonic acid 0.2%, by immersion for 120 s, and rinsed in iso-PrOH. Microphotog. examn. of the developed resist before and after dry etching showed absence of scum and excellent pattern definition.

ST resist developer additive anionic **surfactant**; developer resist prevention scum; sulfonic acid resist developer

IT **Surfactants**
(anionic, resist developer **compn**. contg., for enhanced pattern definition)

IT **Resists**
(electron-beam, developer **compn**. for, contg. anionic **surfactant** for enhanced pattern definition)

IT **76-21-1 375-95-1** 376-34-1 **756-09-2**
1331-61-9 **1546-95-8** 27176-87-0 35465-66-8
RL: USES (Uses)
(**resist** developer contg.)

IT 9011-14-7 **64376-86-9**
RL: USES (Uses)
(**resist** layer from, developer **compn**. for)

IT **76-21-1 375-95-1 756-09-2 1546-95-8**
RL: USES (Uses)
(**resist** developer contg.)

RN 76-21-1 HCAPLUS
CN Nonanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-(CF_2)_7-CHF_2$

RN 375-95-1 HCAPLUS
CN Nonanoic acid, heptadecafluoro- (8CI, 9CI) (CA INDEX NAME)

$HO_2C-(CF_2)_7-CF_3$

RN 756-09-2 HCAPLUS
CN Propanoic acid, 2,2,3,3-tetrafluoro- (9CI) (CA INDEX NAME)

$HO_2C-CF_2-CHF_2$

RN 1546-95-8 HCAPLUS
CN Heptanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoro- (6CI, 7CI, 8CI, 9CI)

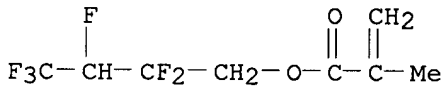
(CA INDEX NAME)

$HO_2C-(CF_2)_5-CHF_2$

IT **64376-86-9**
RL: USES (Uses)
(**resist** layer from, developer **compn.** for)
RN 64376-86-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2,3,4,4,4-hexafluorobutyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 36405-47-7
CMF C8 H8 F6 O2



=> d que

L2	3	SEA FILE=REGISTRY ABB=ON	(251907-30-9/BI OR 275364-62-0/BI OR 275364-64-2/BI)
L4	170015	SEA FILE=REGISTRY ABB=ON	(C(L)F(L)H(L)O)/ELS(L)4/ELC.SUB
L5	125616	SEA FILE=HCAPLUS ABB=ON	L4
L6	2790	SEA FILE=HCAPLUS ABB=ON	L5(L)?RESIST?
L7	676	SEA FILE=HCAPLUS ABB=ON	L6 AND PHOTOG?/SC,SX
L8	881	SEA FILE=HCAPLUS ABB=ON	L5(L)?SURFACTANT?
L9	15	SEA FILE=HCAPLUS ABB=ON	L7 AND L8
L10	9	SEA FILE=HCAPLUS ABB=ON	L2
L14	41	SEA FILE=HCAPLUS ABB=ON	L7 AND SURFACTANT?
L15	50	SEA FILE=HCAPLUS ABB=ON	L9 OR L10 OR L14
L16	6862	SEA FILE=HCAPLUS ABB=ON	(FLUOR? OR PERFLUOR? OR F)(2A)SURFACTANT?
L17	1097	SEA FILE=HCAPLUS ABB=ON	L16 AND ?RESIST?
L18	366	SEA FILE=HCAPLUS ABB=ON	L17 AND PHOTOG?/SC,SX
L21	4	SEA FILE=HCAPLUS ABB=ON	L18 AND CONTACT?(2A)?ANGLE?
L22	250	SEA FILE=HCAPLUS ABB=ON	L18 AND SURFACTANTS/IT
L23	126	SEA FILE=HCAPLUS ABB=ON	L22 AND (COMPOSITION? OR COMPNS)
L24	66	SEA FILE=HCAPLUS ABB=ON	L23 AND MOA/RL
L25	11	SEA FILE=HCAPLUS ABB=ON	L24 AND RESISTS/IT
L26	39	SEA FILE=HCAPLUS ABB=ON	L22 AND PHOTO?(3A)?GENERAT?
L27	93	SEA FILE=HCAPLUS ABB=ON	L15 OR L21 OR L25 OR L26
L28	83	SEA FILE=HCAPLUS ABB=ON	L27 AND PHOTOG?/SC
L29	76	SEA FILE=HCAPLUS ABB=ON	L28 AND SURFACTANT?/IT
L30	732	SEA FILE=HCAPLUS ABB=ON	FLUOROSURFACTANT?
L31	104	SEA FILE=HCAPLUS ABB=ON	L30(L)?RESIST?
L32	54	SEA FILE=HCAPLUS ABB=ON	L31 AND PHOTOG?/SC
L34	29	SEA FILE=HCAPLUS ABB=ON	L32 AND (COMPOSITION? OR COMPNS)
L35	88	SEA FILE=HCAPLUS ABB=ON	L29 OR L34
L36	79	SEA FILE=HCAPLUS ABB=ON	L35 AND (RESISTS/IT OR PHOTORESISTS/IT)

```
L37          70 SEA FILE=HCAPLUS ABB=ON  L36 AND (COMPOSITION? OR COMPNS)
L38          77 SEA FILE=HCAPLUS ABB=ON  L37 OR L10
L39         105 SEA FILE=HCAPLUS ABB=ON  L27 OR L34
L40         102 SEA FILE=HCAPLUS ABB=ON  L39 AND P/DT
L44          34 SEA FILE=HCAPLUS ABB=ON  L40 NOT 1999-2003/AY
L45          36 SEA FILE=HCAPLUS ABB=ON  L40 NOT 1999-2003/PRY
L46          36 SEA FILE=HCAPLUS ABB=ON  L44 OR L45
L47          16 SEA FILE=HCAPLUS ABB=ON  (L38 OR L46) NOT L38
L48          14 SEA FILE=HCAPLUS ABB=ON  L47 AND SURFACTANT?/IT


=> d l48 1-14 bib abs hitind fhitstr

L48  ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2003 ACS
AN   1999:681462  HCAPLUS
DN   131:300680
TI   Hard coat for optical recording media and optical recording media made
     from the same
IN   Yoshida, Reiko; Obayashi, Gentaro
PA   Toray Industries, Inc., Japan
SO   Jpn. Kokai Tokkyo Koho, 7 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   JP 11293159        A2   19991026      JP 1998-97315    19980409
PRAI JP 1998-97315           19980409
AB   The coat, having good resistant to sweat and fingerprint mark,
     comprises a hard coat contg. 0.01-3 % a noncrosslinkable fluoro
     surfactant and 0.01-5% a crosslinkable fluoro
     surfactant. Thus, a coat, having oleic acid contact
     angle 77.3.degree. and for polycarbonate disk coating, was prepd.
     from a mixt. of a UV-curable urethane acrylate 50, a polyfunctional
     acrylate 48, Irgacurel 84 2, Fluorad FC 430 0.6 and Viscoat 8F 2 parts.
IC   ICM  C09D007-12
     ICS  C09D004-02; C09D133-00; G11B007-24; C09D201-00
CC   42-13 (Coatings, Inks, and Related Products)
     Section cross-reference(s): 74
IT   Optical disks
       Surfactants
       (hard coat for optical recording media and optical recording media made
       from the same)

L48  ANSWER 2 OF 14  HCAPLUS  COPYRIGHT 2003 ACS
AN   1999:209937  HCAPLUS
DN   130:244525
TI   Application solution for antireflective film formation
IN   Tanabe, Masato; Wakitani, Kazumasa; Kobayashi, Seiichi; Nakayama,
     Toshimasa
PA   Tokyo Ohka Kogyo Co., Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 5 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
```

PI	JP 11084640	A2	19990326	JP 1997-256227	19970905
	US 6132928	A	20001017	US 1998-148997	19980908
PRAI	JP 1997-256227	A	19970905		

AB The soln. is useful for forming a homogeneous reflective film with no surface defects on a **resist** film. The antireflective film has **contact angle** with the **resist** film .ltoreq.15.degree.. The soln. may contain a water-sol. film formable component, a **F**-based **surfactant**, and N-alkyl-pyrrolidone. The film is useful for pattern formation by lithog.

IC ICM G03F007-004
ICS C09D005-00; G03F007-11; H01L021-027

CC 74-12 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

IT **Surfactants**
(**fluorosurfactants**; application soln. for antireflective film formation)

L48 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1997:802349 HCAPLUS
DN 128:134437
TI Image-forming photosensitive material for color proofing
IN Shimizu, Kazuyuki; Iwashita, Hironobu; Tobisawa, Seiichi
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09325474	A2	19971216	JP 1996-145897	19960607
PRAI JP 1996-145897		19960607		

AB The material comprises a colored photosensitive layer contg. a vinyl acetate-based polymer binder and a F-contg. **surfactant** on a support. The material has a multilayer structure of a heat-softening releasing layer or a heat-softening layer, a releasing layer, and a colored photosensitive layer contg. a F-contg. **surfactant** successively layered on a support. The material shows blocking prevention and no irregularity on the surface.

IC ICM G03F007-004
ICS C09D004-00; C09D004-02; G03F003-10; G03F007-11

CC 74-6 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 46

ST image forming material color proofing; photosensitive layer vinyl acetate polymer; fluorine contg **surfactant** photosensitive layer; blocking resistance photosensitive color proofing material

IT Fatty acids, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(branched fatty acids, vinyl esters, polymers with vinyl acetate; photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking resistance)

IT Phenolic resins, processes
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(cresol-based, photosensitive layer contg.; photosensitive

image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking resistance)

IT Parting materials
(in photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking resistance)

IT **Surfactants**
(photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking resistance)

IT Lithographic plates
(photosensitive; photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking resistance)

IT 108-05-4DP, Acetic acid ethenyl ester, polymers with versatic acid vinyl ester, preparation 3724-65-0DP, 2-Butenoic acid, polymers with vinyl acetate and vinyl versatic acid ester
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking resistance)

IT 25053-88-7, Formaldehyde-p-cresol copolymer 36451-09-9
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(photosensitive layer contg.; photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking resistance)

IT 29403-94-9 **29991-77-3** 30282-36-1 60194-48-1
64376-87-0 94422-67-0 201669-23-0 **201669-24-1**
201669-26-3 201669-28-5 **201669-29-6** **201669-30-9**
201669-31-0 201669-32-1 201669-33-2 **201669-34-3**
201669-35-4 201669-36-5 **201749-31-7** 201749-32-8
201749-33-9 **201798-08-5** **201798-10-9** 201798-12-1
201798-14-3 201798-16-5 **201798-17-6** **201798-18-7**
201798-19-8 **201872-96-0** 201872-97-1
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactants**; photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking **resistance**)

IT 24937-78-8, Evaflex P 1407
RL: TEM (Technical or engineered material use); USES (Uses)
(thermoplastic releasing layer; photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking resistance)

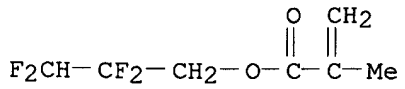
IT **29991-77-3**
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactants**; photosensitive image-forming material contg. vinyl acetate polymers and fluorine-contg. **surfactants** showing blocking **resistance**)

RN 29991-77-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2,3,3-tetrafluoropropyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 45102-52-1
CMF C7 H8 F4 O2



L48 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1997:757210 HCAPLUS
DN 128:36027
TI Anti-reflective, abrasion resistant, anti-fogging coated articles and methods
IN Ko, John H.; Fung, Simon S.
PA Minnesota Mining and Manufacturing Company, USA
SO PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DT **Patent**
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9743668	A1	19971120	WO 1997-US6420	19970415
	W: AU, CA, JP, MX				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5846650	A	19981208	US 1996-644136	19960510
	AU 9728037	A1	19971205	AU 1997-28037	19970415
	EP 898721	A1	19990303	EP 1997-922336	19970415
	EP 898721	B1	20021127		
	R: DE, DK, FR, GB, SE				
	JP 2000511950	T2	20000912	JP 1997-540874	19970415
PRAI	US 1996-644136	A	19960510		
	WO 1997-US6420	W	19970415		

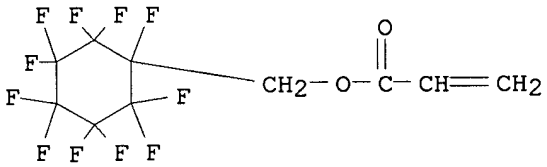
AB Articles comprising a substrate having a surface and a coating on the surface of the substrate are described in which the coating comprises at least a fluoropolymer and a fluorochem. **surfactant** selected such that the article is antireflective, abrasion resistant, and antifogging. Articles are also described which are provided with coatings from fluoropolymers and cross-linked reaction products of .gtoreq.1 fluorinated ene-functional reactants selected so that the article is antireflective and abrasion resistant. Methods of making the articles are also described.
IC ICM G02B001-11
CC 42-7 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73, **74**
IT **Surfactants**
(fluorosurfactants; antireflective abrasion-resistant antifogging coated articles and their prodn.)
IT **40677-94-9D**, L 11619, polymers with acrylates
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PROC (Process); USES (Uses)
(L 11619; antireflective abrasion-**resistant** antifogging coated articles and their prodn.)
IT 868-77-9D, polymers with acrylates **918-36-5D**, polymers with acrylates 1652-63-7, FLUORAD FC-135 2991-51-7, FLUORAD FC-129 9011-14-7, Polymethyl methacrylate 29117-08-6, FLUORAD FC-170C 31212-88-1 51909-90-1, ACRYLOID A-11 58229-85-9, ACRYLOID B-44 67906-42-7, FLUORAD FC-120 68958-61-2, FLUORAD FC-171 199669-37-9 199669-38-0D, polymers with acrylates 199744-82-6 **199747-84-7**

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PROC (Process); USES (Uses)
(antireflective abrasion-**resistant** antifogging coated articles and their prodn.)

IT **40677-94-9D**, L 11619, polymers with acrylates
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PROC (Process); USES (Uses)
(L 11619; antireflective abrasion-**resistant** antifogging coated articles and their prodn.)

RN 40677-94-9 HCAPLUS

CN 2-Propenoic acid, (undecafluorocyclohexyl)methyl ester (9CI) (CA INDEX NAME)



L48 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:320991 HCAPLUS

DN 126:299691

TI Chemically-amplified positive-working **resist** material containing organic solvents having group unstable to acid

IN Watanabe, Satoshi; Oikawa, Katsuyuki; Takeda, Yoshifumi; Nagura, Shigehiro

PA Shinetsu Chem Ind Co, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT **Patent**

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09068803	A2	19970311	JP 1995-246873	19950831
	JP 3060913	B2	20000710		
PRAI	JP 1995-246873		19950831		

AB The **resist** material contains an alkali-sol. resin, a **photoacid generator**, and an org. solvent contg. an org. solvent with b.p. 90-200.degree. having .gtoreq.1 group which in unstable to acid. The solvent is preferably selected from AcOCMe3, EtCO2CMe3, and PrCO2CMe3. The material may contain a dissoln. inhibitor having a group which in unstable to acid and a fluorosurfactant. The material is sensitive to high-energy beam, esp. to KrF excimer laser, shows good resoln., storage stability, film-forming property, and provides a **resist** profile with rectangular shape.

IC ICM G03F007-039
ICS G03F007-004; G03F007-029; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST chem amplified pos working **resist**; butyl alkanoate solvent pos **resist**

IT **Surfactants**
(**fluorosurfactants**; chem.-amplified pos.-working **resist** material contg. org. solvents having group unstable to

acid to improve resoln.)

IT **Resists**
(pos.-working; chem.-amplified pos.-working **resist** material contg. org. solvents having group unstable to acid to improve resoln.)

IT 540-88-5, tert-Butyl acetate 2308-38-5, tert-Butyl butyrate 11114-17-3, FC 430 20487-40-5, tert-Butyl propionate 129674-22-2
RL: TEM (Technical or engineered material use); USES (Uses)
(chem.-amplified pos.-working **resist** material contg. org. solvents having group unstable to acid to improve resoln.)

IT 117458-06-7
RL: TEM (Technical or engineered material use); USES (Uses)
(dissoln. inhibitor; chem.-amplified pos.-working **resist** material contg. org. solvents having group unstable to acid to improve resoln.)

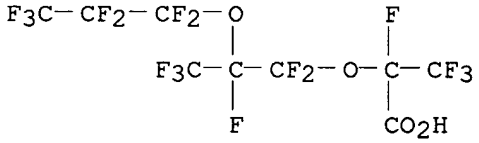
IT 66003-78-9, Triphenylsulfonium triflate
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; chem.-amplified pos.-working **resist** material contg. org. solvents having group unstable to acid to improve resoln.)

L48 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1997:197822 HCAPLUS
DN 126:192982
TI Water-soluble patterning material for manufacture of protective film on photoresist
IN Hatakeyama, Jun; Watanabe, Satoshi; Ishihara, Toshinobu; Umemura, Mitsuo; Okazaki, Satoshi
PA Shinetsu Chem Ind Co, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09006008	A2	19970110	JP 1995-172779	19950615
PRAI JP 1995-172779		19950615		

OS MARPAT 126:192982
AB The material contains H2O and perfluoroalkyl ether carboxylic acid-type **surfactants** F[C(CF3)FCF2O]pC(CF3)FCO2H (p = 1-10). A protective film was obtained without defects.
IC ICM G03F007-11
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 46
ST **surfactant** water sol photoresist overcoating; perfluoroalkyl ether carboxylic acid **surfactant** patterning
IT Photoresists
Surfactants
(water-sol. patterning material contg. perfluoroalkyl ether-type **surfactant** for protective film on photoresist)
IT 9003-01-4, Poly(acrylic acid) 9057-02-7, Pullulan 25086-89-9, Luviskol VA 64 156391-75-2
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(water-sol. patterning material contg. perfluoroalkyl ether-type **surfactant** for protective film on photoresist)

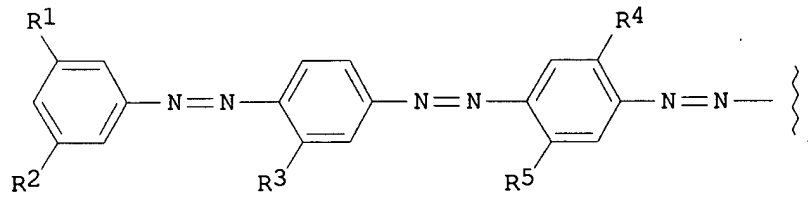
IT **13252-14-7 65294-16-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(water-sol. patterning material contg. perfluoroalkyl ether-type **surfactant** for protective film on **photoresist**)
IT **13252-14-7**
RL: TEM (Technical or engineered material use); USES (Uses)
(water-sol. patterning material contg. perfluoroalkyl ether-type **surfactant** for protective film on **photoresist**)
RN 13252-14-7 HCAPLUS
CN Propanoic acid, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]- (9CI) (CA INDEX NAME)

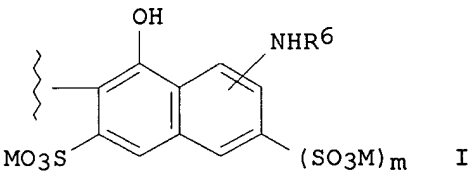


L48 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1996:476737 HCAPLUS
DN 125:117652
TI Ink composition with good water resistance and ink jet recording method using the same
IN Kanaya, Miharu; Owatari, Akio; Takatsuna, Junko; Yatake, Masahiro; Hayashi, Hiroko; Ono, Takashi; Sawatari, Yoshihiro; Yagyu, Tatsuya
PA Seiko Epson Corporation, Japan
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DT **Patent**
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 716133	A2	19960612	EP 1995-119046	19951204
	EP 716133	A3	19970618		
	EP 716133	B1	20000712		
	R: CH, DE, FR, GB, IT, LI, NL, SE				
	US 5616174	A	19970401	US 1995-566834	19951204
	JP 09003379	A2	19970107	JP 1995-316970	19951205
	JP 3341968	B2	20021105		
PRAI	JP 1994-300695	A	19941205		
	JP 1995-97238	A	19950421		

OS MARPAT 125:117652
GI





I

AB An ink compn. is provided which enables high-quality recording on plain paper and can record an image having excellent water resistance. The ink compn. comprises dye I: M = H, alkali metal, (un)substituted ammonium, morpholinium, or piperidinium, R1 = H, NH2, or CO2M , R2 = CO2M or P(O)n(OM)2 (n = 0-1); R3 = H, CO2M, or SO3M; R4 and R5 independently represent H, C1-6 alkyl group, or C1-6 alkoxy group; R6 represents H, a Ph group which may be substituted, an alkylcarbonyl group, or an alkyl group which may be substituted with a hydroxyl or alkoxy group; and m = 0-1. The ink compns. contain I, and optionally a nonionic acetylene glycol **surfactant**, a glycol ether, a polyhydric alc., or a N-contg. cyclic compd. Thus, I (R1 = H, R2 = P(O)(ONH4)2, R 3 = CO2NH4, R4, R5 = OMe, R6 = H, m = 0, M = NH3) was prepd. and combined with 2-pyrrolidone, and ethanol to give an ink. The ink exhibited good water resistance and image quality.

IC ICM C09D011-00

CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): **41**

IT 126-86-3, Surfynol TG 9014-85-1, Surfynol 465
RL: TEM (Technical or engineered material use); USES (Uses)
(**surfactant**; water-resistant ink compns. for ink jet printing contg. trisazo dye and)

IT 56-81-5, 1,2,3-Propanetriol, uses 64-17-5, Ethanol, uses 71-23-8, 1-Propanol, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 102-71-6, Triethanolamine, uses 111-29-5, 1,5-Pentanediol 111-46-6, uses 111-48-8, Thiodiglycol 112-34-5, Diethylene glycol monobutyl ether 143-22-6, Triethylene glycol monobutyl ether 616-45-5, 2-Pyrrolidone 29387-86-8, Propylene glycol monobutyl ether **70688-67-4**, Ftergent 251
RL: TEM (Technical or engineered material use); USES (Uses)
(water-**resistant** ink compns. for ink jet printing contg. trisazo dye and)

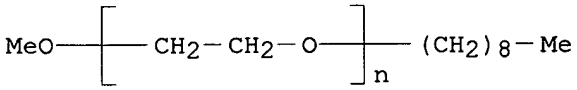
IT **70688-67-4**, Ftergent 251
RL: TEM (Technical or engineered material use); USES (Uses)
(water-**resistant** ink compns. for ink jet printing contg. trisazo dye and)

RN 70688-67-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(heptadecafluorononenyl)-.omega.-methoxy- (9CI) (CA INDEX NAME)

CM 1

CRN 70688-66-3
CMF (C2 H4 O)n C10 H5 F17 O
CCI IDS, PMS



17 (D1—F)

L48 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1993:103654 HCAPLUS
DN 118:103654
TI Preparation of polymer fine particles for dry toners
IN Muto, Kenkichi
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04283201	A2	19921008	JP 1991-70433	19910312
PRAI	JP 1991-70433		19910312		

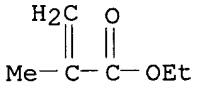
AB Title particles with good humidity resistance and uniformity, are prepd. by polymn. of hydrophilic monomers in presence of water-sol. fluoro-based **surfactants** (1st step) and polymn. of monomers contg. hydrophobic polymerizable monomers as main components (2nd step). Thus, H2O 240, 0.1% Megafac F 141 (perfluoroalkyl ethylene oxide adduct) 7.2, Bu acrylate 2.5, and K persulfate 0.135 part were heated at 80.degree. for 1 h under N (1st step; av. particle size 0.081 .mu.m), which were mixed with 50 parts n-Bu methacrylate and 60 parts trifluoroethyl methacrylate at 80.degree. for 4 h with mixing aq. soln. of 0.5 part K persulfate for 7 h, and further treated at 80.degree. for 10 h to give fine particles with good uniformity (2nd step; conversion 98.0%, av. particle size 0.29 .mu.m).

IC ICM C08F002-24
ICS G03G009-087
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): **74**
IT **Surfactants**
(water-sol., fluoro-based, for prepn. of polymer fine particles)
IT 146278-83-3P **146278-84-4P**
RL: PREP (Preparation)
(fine particles, prepn. of, with good humidity **resistance** and uniformity)
IT 2991-51-7, Megafac F 120 69458-58-8, Megafac F 141
RL: USES (Uses)
(**surfactants**, for prepn. of polymer fine particles)
IT **146278-84-4P**
RL: PREP (Preparation)

(fine particles, prepn. of, with good humidity **resistance** and uniformity)
RN 146278-84-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with butyl 2-propenoate and trifluoroethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

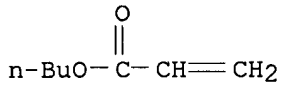
CRN 38785-10-3
CMF C6 H7 F3 O2
CCI IDS



3 (D1—F)

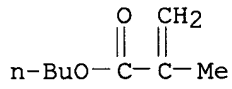
CM 2

CRN 141-32-2
CMF C7 H12 O2



CM 3

CRN 97-88-1
CMF C8 H14 O2



L48 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1990:169081 HCAPLUS
DN 112:169081
TI Electrophotographic photoconductors containing polycarbonate
IN Shigeta, Kunio; Ichino, Tadashi; Yoshizawa, Hideo; Sakai, Eiichi; Takei, Yoshiaki
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01253751	A2	19891011	JP 1988-81730	19880401
PRAI	JP 1988-81730		19880401		

GI For diagram(s), see printed CA Issue.

AB The title **photoconductors** with charge-carrier **generating** and transporting layers contain nonionic surfactants and polycarbonates having repeating units I and/or II [R1-2 = H, (cyclo)alkyl, aryl (.gtoreq.1 of R1-2 = bulky group); R3-10 = H, halo, (cyclo)alkyl; polymn. degree = 10-5000, preferably 50-100; A = carbocyclic or heterocyclic ring]. These photoconductors are wear-**resistant**, easily cleanable, and moisture-**resistant**, have good coatability and smooth surface, and provide good printability and image quality. Thus, an Al substrate was undercoated with a maleic anhydride- vinyl acetate-vinyl chloride copolymer, coated with a charge-generating layer contg. a dye III and Panlite L-1250 (bisphenol A polycarbonate), and with a charge-transporting layer compn. contg. 15 g Iupilon Z200 (invention polycarbonate), 11.25 g transporting agent IV, and 0.0 mL **Fluorad** FC431 (nonionic **surfactant**) 0.01 mL to obtain the photoconductor. Tests showed the described advantages of the photoconductor over ref. photoconductors using e.g. bisphenol A polycarbonate as binder or ionic surfactants.

IC ICM G03G005-05
ICS G03G005-05

CC 74-3 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38

IT Electrophotographic plates
(polycarbonate binders and nonionic **surfactants** for)

IT **Surfactants**
(nonionic, electrophotog. photoconductors contg.)

L48 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1988:446235 HCAPLUS
DN 109:46235
TI Positive photoresists containing fluoroorganic compounds for improved surface characteristics
IN Dreher, Bernhard; Siebert, Werner; Baumbach, Wolfgang; Prescher, Dietrich; Kuhnert, Lothar
PA VEB Fotochemische Werke Berlin, Ger. Dem. Rep.
SO Ger. (East), 4 pp.
CODEN: GEXXA8
DT **Patent**
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 247300	A1	19870701	DD 1986-288415	19860327
PRAI	DD 1986-288415		19860327		

AB Pos.-working photoresists with decreased surface roughness are composed of .gtoreq.1 deriv. of a 1-oxo-2-diazoarenesulfonic acid, .gtoreq.1 nonwater-sol., but aq. alk. soln.-swellable or sol. binder, such as a novolak, further additives as solvents, dyes, and/or hardeners, and a fluoroorg. compd. of the formula RXAr (R = a fluoroaliph. group; X = CF2, CH2, or CO; and Ar = Ph or naphthyl). Thus, a soln. contg. a semialternating o-cresol-p-cresol-bis(p-cresol) novolak resin, 1,3-bis(1'-oxo-2'-diazonaphthensulfonyloxy-4')benzophenone,

1,3-bis(1'-oxo-2'-diazonaphthenesulfonyloxy-5')benzophenone, 3,4,5-tris(1'-oxo-2'-diazonaphthensulfonyloxy-5')benzoic acid iso-Bu ester, and diglyme was stirred, filtered, perfluorooctylbenzene added, and the resist coated on a SiO2-coated support to produce a layer with a surface roughness of 4 nm.

IC ICM G03C001-72

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST fluoroalkylarene **surfactant** photoresist surface roughness; fluoroalkanoylarene **surfactant** photoresist surface roughness; **surfactant** photoresist surface roughness

IT **Surfactants**
(fluoroalkylarenes and fluoroalkanoylarenes, photoresists contg., for decreased surface roughness)

IT Phenolic resins, uses and miscellaneous
RL: USES (Uses)
(novolak, photoresists contg. fluoroorg. compd. **surfactants** and, for decreased surface roughness)

IT Resists
(photo-, contg. fluoroorg. compd. **surfactants** for decreased surface roughness)

IT 114750-79-7 115325-21-8 115325-22-9
RL: USES (Uses)
(photoresist contg. novolak resin and fluoroorg. compd. **surfactant** and, for decreased surface tension)

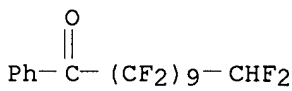
IT 114651-36-4
RL: USES (Uses)
(photoresists contg. oxodiazoarenesulfonic acid deriv. and fluoroorg. compd. **surfactant** and, for decreased surface roughness)

IT 71-43-2D, Benzene, perfluoroalkanoyl derivs. **6500-35-2** 87405-83-2 114713-10-9 114750-78-6 **114766-45-9**
RL: USES (Uses)
(**surfactants, photoresists** contg., for decreased surface roughness)

IT **6500-35-2**
RL: USES (Uses)
(**surfactants, photoresists** contg., for decreased surface roughness)

RN 6500-35-2 HCAPLUS

CN 1-Undecanone, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoro-1-phenyl- (9CI) (CA INDEX NAME)



L48 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2003 ACS

AN 1988:229665 HCAPLUS

DN 108:229665

TI Positive photoresists containing fluoroorganic compounds for improved surface characteristics

IN Prescher, Dietrich; Platonov, Vjaceslav E.; Dvornikova, Kira V.; Wanke, Andreas; Baumbach, Wolfgang

PA VEB Fotochemische Werke Berlin, Ger. Dem. Rep.

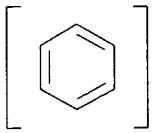
SO Ger. (East), 3 pp.

CODEN: GEXXA8
DT **Patent**
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DD 247301	A1	19870701	DD 1986-288416	19860327
PRAI DD 1986-288416		19860327		

AB Pos.-working photoresists with decreased surface roughness are composed of .gtoreq.1 deriv. of a 1-oxo-2-diazoarenesulfonic acid, .gtoreq.1 nonwater-sol., but aq. alk. soln.-swellable or sol. binder, such as a novolak resin, further additives as solvents, dyes, and/or hardeners, and a fluoroorg. compd. of the formula C6F6-a[O(CH2)n(CF2)mR]a (R = H or F; a = 1-3; m = 2-10; n = 1 or 2). Thus, to a soln. contg. a semialternating o-cresol-p-cresol-bis(p-cresol) novolak resin, 3,4,5-tris(1'-oxo-2'-diazonaphthenesulfonyloxy-5')benzophenone, BuOAc, ethylglycol acetate, and xylene was added 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-henicosafluorododecylpentafluorobenzene and the soln., filtered, coated on a SiO2-coated Si wafer and dried to show a surface roughness of 10 nm.

IC ICM G03C001-72
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST fluoroalkylperfluorobenzene **surfactant** photoresist surface roughness; perfluorobenzene fluoroalkyl photoresist surface roughness
IT **Surfactants**
(fluoroalkylperfluorobenzenes as, pos.-working photoresists contg., for decreased surface roughness)
IT Phenolic resins, uses and miscellaneous
RL: USES (Uses)
(novolak, pos.-working photoresists contg. fluoroalkylperfluorobenzene **surfactants** and, for decreased surface roughness)
IT Resists
(photo-, pos.-working, contg. fluoroalkylperfluorobenzene **surfactants** for decreased surface roughness)
IT 114651-34-2
RL: USES (Uses)
(pos.-working photoresists contg. fluoroalkylperfluorobenzene **surfactants** and, for decreased surface roughness)
IT 114750-77-5
RL: USES (Uses)
(pos.-working photoresists contg. novolak resins and fluoroalkylperfluorobenzene **surfactants** and, for decreased surface roughness)
IT **114713-07-4 114713-08-5 114713-09-6 114750-76-4**
RL: USES (Uses)
(**surfactants**, pos.-working **photoresists** contg., for decreased surface roughness)
IT **114713-07-4**
RL: USES (Uses)
(**surfactants**, pos.-working **photoresists** contg., for decreased surface roughness)
RN 114713-07-4 HCAPLUS
CN Benzene, tetrafluorobis[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluorononyl)oxy]- (9CI) (CA INDEX NAME)

1/2 

2 (D1—F)

D1—O—CH_2—$(CF_2)_7$—CHF_2

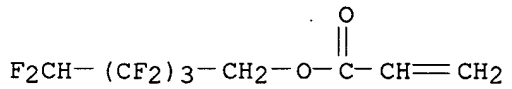
L48 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1987:608760 HCAPLUS
DN 107:208760
TI Photographic matting agents and antistatic **surfactants**
IN Kobayashi, Toru; Shibue, Toshiaki; Kunieda, Sunao
PA Konishiroku Photo Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 29 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62143046	A2	19870626	JP 1985-285221	19851217
	JP 06042054	B4	19940601		
PRAI	JP 1985-285221		19851217		

AB Photog. materials contains a F-contg. matting agent >85% of the total amt. of the matting agent and an antistatic fluorinated **surfactant** to improve their static prevention, resistance to adhesion, and uniform coating. The matting agent may be PTFE and the **surfactant** may be CF3(CF2)7SO3Na.
IC ICM G03C001-76
ICS G03C001-82
CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST matting agent **surfactant** photog material; fluorinated matting agent **surfactant** photog
IT **Surfactants**
(fluorine-contg., as photog. antistatic agent, for improved static prevention and uniform coating)
IT 9002-84-0 **25656-08-0 110226-61-4 110933-73-8**
RL: USES (Uses)
(photog. matting agent, for improved **resistance** to adhesion and uniform coating)
IT **25656-08-0**
RL: USES (Uses)
(photog. matting agent, for improved **resistance** to adhesion and uniform coating)
RN 25656-08-0 HCAPLUS
CN 2-Propenoic acid, 2,2,3,3,4,4,5,5-octafluoropentyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

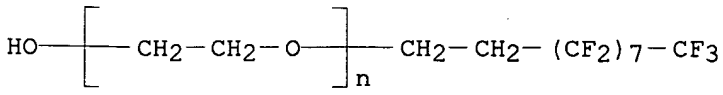
CRN 376-84-1
CMF C8 H6 F8 O2



L48 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1987:468197 HCAPLUS
DN 107:68197
TI Developers for positive-working photoresists
IN Tanaka, Hatsuyuki; Asaumi, Shingo
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62032451	A2	19870212	JP 1985-171833	19850806
	US 4784937	A	19881115	US 1986-892646	19860804
PRAI	JP 1985-171833		19850806		
	JP 1985-171834		19850806		

AB The title developers, contg. metal ion-free org. bases and 50-500 ppm F-contg. nonionic **surfactants**, are suitable for pos.-working photoresists contg. quinone diazides and show reduced temp.-dependence during development. An exposed pos.-working photoresist produced uniform patterns at 15-40.degree. in 30 s when developed with an aq. soln. contg. 2.38% tetramethylammonium hydroxide and 500 ppm F3C(CF2)7(CH2CH2O)10H.
IC ICM G03C005-24
ICS G03C001-72; G03F007-00; G03F007-08
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST photoresist pos developer org base; fluorine nonionic **surfactant** tetramethylammonium hydroxide; choline tetramethylammonium hydroxide developer photoresist
IT Resists
(photo-, pos.-working, developer for, contg. fluoro compd. **surfactant**)
IT 29117-08-6 **58228-15-2** 109636-63-7 109636-64-8
RL: USES (Uses)
(**surfactants**, developer contg., for pos.-working **photoresist**)
IT **58228-15-2**
RL: USES (Uses)
(**surfactants**, developer contg., for pos.-working **photoresist**)
RN 58228-15-2 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)-.omega.-hydroxy- (9CI) (CA INDEX NAME)



L48 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2003 ACS
AN 1987:449590 HCAPLUS
DN 107:49590
TI Developer for positive resists
IN Tanaka, Hatsuyuki; Obara, Hidekatsu; Sato, Yoshiyuki; Asaumi, Shingo; Nakayama, Toshimasa; Yokota, Akira; Nakane, Hisashi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62032452	A2	19870212	JP 1985-171834	19850806
	JP 05067028	B4	19930924		
	US 4784937	A	19881115	US 1986-892646	19860804
PRAI	JP 1985-171833		19850806		
	JP 1985-171834		19850806		

AB The title developers, based on metal-free org. bases, contain 50-5000 ppm anionic F-contg. **surfactants**. The addn. of the **surfactants** provides very uniform developability of the pattern and much improved stability of the line width. The addn. also shortens the development time, and decreases the temp.-dependence of the development. To an aq. soln. contg. 2.38% Me4NOH was added 100 ppm F15C7CO2NH4 and the soln. was used for development of an exposed pos. resist on Si wafer. Patterns with uniform line widths were obtained by 20-s development. A control developer not contg. the **surfactant** required 60 s for the same results.
IC ICM G03C005-24
ICS G03C001-72
ICA G03F007-08; G03F007-10
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST developer resist fluorine contg **surfactant**; pos resist fast working developer
IT **Surfactants**
(fluorine-contg., for fast-working developer for pos. photoresists)
IT Resists
(photo-, pos.-working, fast-working developer contg. fluorine-contg. **surfactant** for)
IT 62-49-7 75-59-2, Tetramethylammonium hydroxide
RL: USES (Uses)
(photoresist developer contg. fluorine-contg. **surfactant** and, fast-working)
IT **335-67-1 335-76-2** 1763-23-1 3825-26-1 **109299-34-5** 109299-35-6 109299-36-7
RL: USES (Uses)
(**surfactants**, for fast-working developer for pos. **photoresist**)
IT **335-67-1**

RL: USES (Uses)
(**surfactants**, for fast-working developer for pos. **photoresist**)
RN 335-67-1 HCAPLUS
CN Octanoic acid, pentadecafluoro- (8CI, 9CI) (CA INDEX NAME)

$F_3C-(CF_2)_6-CO_2H$